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First annual progress report of the Board of Auditors on the implementation of the information and communications technology strategy

Note by the Secretary-General

The Secretary-General has the honour to transmit herewith to the General Assembly a letter dated 30 June 2017 from the Chair of the Board of Auditors together with the report of the Board on progress in the implementation of the information and communications technology strategy.

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Letter of transmittal

Letter dated 30 June 2017 from the Chair of the Board of Auditors addressed to the President of the General Assembly

I have the honour to transmit to you herewith the first report of the Board of Auditors on the implementation of the information and communications technology strategy for the United Nations.

(*Signed*) Shashi Kant **Sharma**
Comptroller and Auditor General of India
Chair of the Board of Auditors
(Lead Auditor)

Information and communications technology: key facts

Budget and resources

$1,372.8 million	Information and communications technology (ICT) resources, excluding Umoja, for the biennium 2016-2017
67.95 per cent	Estimated percentage of the annualized ICT budget relating to peacekeeping operations (2016/17)
4,645	Estimated total ICT workforce
1,652	Number of applications in use across the United Nations, down from 2,340 in 2014
594	Number of locations in which ICT is used

Timeline

October 2014	The Secretary-General submitted the ICT strategy (A/69/517)
December 2014	The General Assembly adopted resolution 69/262, in which it endorsed the ICT strategy
September 2015	The Secretary-General submitted his first report on the status of implementation of the ICT strategy for the United Nations (A/70/364 and Corr.1)
December 2015	The Board of Auditors submitted its report on progress in the handling of ICT affairs in the Secretariat (A/70/581)
February 2016	The Advisory Committee on Administrative and Budgetary Questions submitted its report on progress in the handling of ICT affairs in the Secretariat (A/70/755) and recommended that the Board of Auditors submit an annual progress report during the five-year implementation period of the ICT strategy
April 2016	The General Assembly adopted resolution 70/238 B, in which it endorsed the conclusions and recommendations contained in the report of the Advisory Committee (A/70/755)
September 2016	The Secretary-General submitted his second report on the status of implementation of the ICT strategy for the United Nations (A/71/400)

Strategy

20	Number of strategic projects underpinning the strategy being reported on by the Office of Information and Communications Technology in document A/71/400. Of 20 projects, 7 have been reported as completed
2014-2020	The five-year time frame of 2013-2017 indicated in the strategic road map (A/69/517, annex I) has been revised to 2014-2020, in line with the Secretary-General's second report on the status of implementation of the ICT strategy for the United Nations (A/71/400)

First annual progress report of the Board of Auditors on the implementation of the information and communications technology strategy for the United Nations

Summary

Introduction

In 2014, at its sixty-ninth session, the General Assembly adopted resolution 69/262, in which it endorsed the information and communications technology (ICT) strategy for the United Nations proposed in the report of the Secretary-General (A/69/517). The idea behind the strategy is to create a unified global provision of ICT to enable the successful delivery of the United Nations' mandate. It is aimed at aligning all ICT activities with the United Nations' goals and it has identified three objectives to that end: (a) the direction of ICT in support of organizational priorities, such as Umoja; (b) the harmonization of existing infrastructure and processes; and (c) greater emphasis on innovation to support the substantive work of the United Nations. To achieve those objectives, the strategy focuses on five major areas, known as key drivers, namely, modernization in support of organizational priorities, transformation of ICT delivery, innovation to foster new technological solutions in the long term, strengthened governance and leadership framework, and optimal use of ICT resources.

The Secretary-General submitted his first report on the status of implementation of the strategy (A/70/364 and Corr.1) in September 2015 and his second report (A/71/400) in September 2016. The Board of Auditors submitted its report on progress in the handling of ICT affairs in the Secretariat to the General Assembly in December 2015 (A/70/581). After consideration of that report, the Advisory Committee on Administrative and Budgetary Questions recommended to the Assembly that the Board submit an annual progress report during the five-year implementation period of the strategy, and the Assembly endorsed that recommendation in resolution 70/238 B. The present report is the first report submitted in compliance with that resolution and it provides an examination of the implementation of the strategy during the years 2015 and 2016.

Key findings

The Board's key findings are presented below.

Governance framework and accountability

The Chief Information Technology Officer has been assigned the responsibility for the overall direction, coordination and implementation of the strategy. However, it is only in September 2016, that is almost two years after the commencement of the five-year strategy, that the Secretary-General's bulletin defining the organization of the Office of Information and Communications Technology and its roles and functions, including that of the Chief Information Technology Officer, was issued (ST/SGB/2016/11). As of February 2017, the delegation of authority and designation of staff members performing significant functions in the Office of Information and Communications Technology had yet to be issued.

Although departments and offices across the Secretariat have a crucial role in ensuring the implementation of the strategy, their accountability framework is

diffused. The provisions in the senior managers' compact[1] with regard to the implementation of the strategy are very subjective and generic in nature and they have not facilitated an objective assessment of their performance in implementing the strategy, leading to a lack of accountability. Meanwhile, departments continue to run their own ICT units and are yet to align their business plans with the strategy.

The mandate for and responsibility of monitoring and ensuring the implementation of the strategy across the Secretariat lie with the governance framework and the Office of Information and Communications Technology. However, a comprehensive system for periodic reporting on progress in implementing various elements of the strategy by all the departments and offices to the Office of Information and Communications Technology is yet to be put in place. This step is essential for the centralized monitoring of project performance, compliance with ICT policies, the optimization of ICT resources, achieving the overall objectives of the strategy and keeping the governance framework informed of progress.

Project implementation

The Board noted that, even when taking into account the revised timelines provided in the first report on the status of implementation of the strategy, six projects had been delayed beyond their expected completion dates. Moreover, three projects expected to be completed by March 2017 had achieved only a 65 to 70 per cent completion rate.

Monitoring of strategic projects

Project monitoring involves continuous tracking of physical and financial progress to control time and cost overruns and execute the project in an economic, efficient and effective manner. However, the Board observed that, while the project timelines and the physical progress achieved in terms of percentage completion had been presented in both reports on the status of implementation of the strategy, details of project cost and financial progress against each of the 20 strategic projects had not been provided in either report.

Information and communications technology policies and compliance

Policies on important subjects, such as information security, disaster recovery, cloud computing, minimum security for websites, videoconferencing, mobile devices, email services or remote access, remain to be promulgated or revised. A policy compliance function to monitor, measure and report on policy implementation is yet to be put in place. Without a system to monitor and ensure compliance with ICT policies across the departments and duty stations, there is limited assurance of such compliance. Furthermore, the Administration has indicated that the self-regulatory policy compliance function mentioned in the first and second reports on the status of implementation of the strategy has not been fully implemented, owing to a lack of resources.

Information and communications technology human resources

ICT staff and their expertise are important assets in the implementation of the strategy. In accordance with the strategy, the Office of Information and Communications Technology is required to work with the Office of Human Resources

[1] The compact is a commitment made by each senior manager to achieve certain objectives, which would be reflected in the workplans and performance assessments of staff at all levels, and for which the Secretary-General will hold senior managers accountable.

Management to create requisite training programmes to promote technical skills. The Board observed that, although training programmes were developed, they could not be implemented owing to a lack of resources. Against the requirements projected by the Office of Information and Communications Technology for training, the funds provided for substantive and technical ICT skills training were less than 5 per cent.

Modernization activities

Information security

While there had been significant progress (60 per cent) by the end of 2015 in the implementation of the strategic project on information security across the Secretariat, a mere 5 per cent progress rate was achieved in 2016. Network security, the classification of information assets and the mandatory implementation of minimum requirements for public websites were areas marked by little progress. The Board also observed that a high percentage of senior officials (Under-Secretaries-General, Assistant Secretaries-General and Professionals) and staff members had not yet undertaken the mandatory information security training.

Transformation activities

Application management

Of around 2,416 applications listed in the United Nations application portfolio repository, the Board observed that 695 applications did not have defined timelines for consolidation. In addition, most of the 1,300 or so websites maintained across the Organization lacked standardization and were not in compliance with ICT policies on public websites, exposing the entire network to serious security risks. Furthermore, the website rationalization had not yet commenced. This is an area where cooperation and support of the departments and offices are essential to make significant progress towards website consolidation and rationalization. The Administration has also indicated that the consolidation of ICT systems was a prerequisite for website rationalization.

User satisfaction with information and communications technology services

With the help of the Office of Information and Communications Technology, the Board conducted a satisfaction survey to assess user perception of the quality and usefulness of the ICT services and products implemented to improve organizational efficiency, across the Secretariat. The survey was originally scheduled from 30 January to 6 February 2017 but was later extended until 12 February 2017. For the purpose of the present report, only the 2,979 complete responses received by 6 February 2017 have been considered. The survey results are provided in annex V.

Innovation

While, according to the strategic road map, innovation was to be implemented beginning January 2015, the Administration has indicated that innovation initiatives undertaken by the Office of Information and Communications Technology were isolated innovations and not based on any standards, including the Control Objectives for Information and Related Technology (COBIT).[2] The Board observed that, after identifying a few emerging areas, nothing further had been done. The Administration stated that the Office of Information and Communications Technology would work on innovation in future, as the consolidation process has now progressed.

[2] A business framework for the governance and management of enterprise information technology.

Optimal use of information and communications technology resources

Governance and review process of information and communications technology investments

Despite the strategy emphasizing that the Office of Information and Communications Technology would oversee and monitor ICT investments to enable more informed decision-making and holistic reporting of global costs, the involvement of that Office and of the Chief Information Technology Officer in ICT procurements has been limited, and ICT procurements undertaken throughout the Secretariat are not subject to a central review or governance, as required in the strategy.

Global sourcing

The strategy requires the negotiation of contract discounts using the global purchasing volume of hardware and software licences. Even though the Secretary-General indicated in his reports on the status of implementation of the strategy that the Organization negotiated discounts in the areas of infrastructure, externally acquired licences and related ICT services, the Office of Information and Communications Technology has not carried out any analysis of discounts obtained so far through global sourcing. The Board observed that neither a clear road map nor a target had been set to achieve cost optimization benefits using global sourcing opportunities.

Defragmentation

The Board observed that progress in defragmentation and consolidation of ICT resources had been slow, with only 3 of 70 ICT units across the Secretariat having been consolidated as of January 2017. The Chef de Cabinet issued an interdepartmental memorandum in February 2016 seeking support and cooperation from the departments and heads of offices in transitioning ICT functions to the enterprise delivery framework, as well as to work on the process of identifying and defragmenting internal departmental ICT functions and transitioning them and corresponding resources to the Office of Information and Communications Technology. Notwithstanding the memorandum, the pace of implementation of this element of the strategy, which will lead to an optimization of ICT resources across the Secretariat, has been slow, and even the ICT units within the Department of Management have not yet been consolidated.

Recommendations

While the recommendations of the Board are presented in detail throughout the report, its main recommendations are that the Administration ensure that:

(a) **(i) Bodies under the ICT governance framework engage proactively in monitoring progress, resolving interdepartmental issues to ensure the implementation of the strategy in compliance with General Assembly resolution 69/262; (ii) the performance measures in the senior managers' compact with regard to the strategy are made more objective and quantifiable; (iii) immediate steps are taken to issue the necessary delegation and designation policies; and (iv) departments submit road maps and take the steps necessary for aligning their business plans with the strategy;**

(b) **The Chief Information Technology Officer and the Office of Information and Communications Technology, as the central authority for implementation of the strategy and its monitoring, not only track the project timelines closely but also monitor the cost of each of the strategic projects to ensure transparency and accountability in substantial investments;**

(c) The Office of Information and Communications Technology completes the task of formulating and promulgating ICT policies in a time-bound manner and establish the proposed self-regulatory compliance function;

(d) Sufficient funds are earmarked for implementing the training plan;

(e) All personnel complete the mandatory information security training;

(f) Progress in website rationalization and harmonization and in application rationalization and consolidation is expedited to mitigate security risks, reduce costs and optimize application value;

(g) The Office of Information and Communications Technology develops a detailed plan of action on innovative emerging technology in consultation with stakeholders;

(h) The relevant policies are suitably revised to ensure that ICT procurements above a prescribed threshold are processed through Umoja and vetted centrally by the Office of Information and Communications Technology to ensure uniformity, standardization, compliance with ICT policies and benchmarking of costs;

(i) A clear road map is developed to realize cost optimization benefits through global sourcing;

(j) Effective steps are taken to ensure the implementation of the enterprise delivery framework and reduce the fragmentation of ICT resources.

I. Background

1. At its sixty-ninth session, in 2014, the General Assembly adopted resolution 69/262, in which it endorsed the information and communications technology (ICT) strategy for the United Nations proposed in the report of the Secretary-General (A/69/517). The idea behind the strategy is to create a unified global provision of ICT to enable the successful delivery of the United Nations' mandate. It is aimed at aligning all ICT activities with the United Nations' goals and it has identified three objectives to that end: (a) the direction of ICT in support of organizational priorities, such as Umoja; (b) the harmonization of existing infrastructure and processes; and (c) greater emphasis on innovation to support the substantive work of the United Nations. To achieve those objectives, the strategy focuses on five major areas, known as key drivers, namely, modernization in support of organizational priorities, transformation of ICT delivery, innovation to foster new technological solutions in the long term, strengthened governance and leadership framework, and optimal use of ICT resources. The original strategic road map is provided in annex II.

2. The Secretary-General submitted his first report on the status of implementation of the strategy (A/70/364 and Corr.1) in September 2015 and his second report (A/71/400) in September 2016.

II. Mandate, scope and methodology

3. The Advisory Committee on Administrative and Budgetary Questions considered the report of the Board on progress in the handling of ICT affairs in the Secretariat (A/70/581) and recommended to the General Assembly that the Board submit an annual progress report during the five-year implementation period of the strategy. The Assembly endorsed the recommendation in resolution 70/238 B. The present report is submitted in compliance with that resolution and covers the period up to December 2016. The audit was conducted from 9 January to 17 February 2017.

4. The audit was conducted primarily to enable the Board to form an opinion on progress in the implementation of the strategy across the Secretariat. The audit included discussions with the Administration and selected user departments.

5. A satisfaction survey was also conducted with the help of the Office of Information and Communications Technology to assess user perception of the quality and usefulness of the ICT services and products implemented to improve organizational efficiency, as well as the level of awareness about the strategy and the level of satisfaction against each ICT service, across the Secretariat. Users were asked to rate their satisfaction level on a scale of 0 to 5, i.e. from "least satisfied" (1) to "most satisfied" (5), with 0 meaning "not aware". For the purpose of the present report, only the 2,979 complete responses received by 6 February 2017 have been considered. The survey results are provided in annex V.

III. Findings and recommendations

A. Follow-up to previous recommendations of the Board of Auditors

6. The Administration has taken action to address a number of the Board's previous recommendations. In most cases, however, action is still under implementation. Of the 23 recommendations made in the Board's previous reports (A/67/651 and A/70/581), 2 (9 per cent) have been fully implemented and 21 (91 per cent) are under implementation.

7. Annex I summarizes the status of implementation of the recommendations. Further comments on progress in implementing previous recommendations are contained in the relevant sections of the present report.

B. Governance and leadership

Governance framework and accountability

8. The strategy was expected to strengthen transparency and accountability and ensure value for money in ICT investments. A new governance framework for implementation of the strategy was proposed with the crucial leadership role of overseeing the ICT architecture, standards and investment choices assigned to the Chief Information Technology Officer. At the apex level of the governance framework are two executive-level advisory groups, namely, the Information and Communication Technology Executive Committee and the Information and Communication Technology Board. Apart from those two executive-level bodies, the ICT governance framework consists of the Information and Communication Technology Policy Committee and the Architecture Review Board.

9. The ICT Executive Committee is the highest-level decision-making body in the Secretariat on overall ICT strategic direction and prioritization, which includes the entirety of ICT in the Secretariat. The Committee is to meet at least once a year and as required, and is to be updated on projects on a quarterly basis.

10. The ICT Board is responsible for ensuring a coherent and coordinated global usage of ICT across departments and duty stations in line with the objectives of the Secretariat and the general policy direction provided by the ICT Executive Committee. The ICT Board is to meet at least once every six weeks.

11. Apart from the ICT Executive Committee and the ICT Board, the governance framework also has an ICT Policy Committee for reviewing and prioritizing policy proposals received from other governance bodies, service owners and subject matter experts, and assessing their applicability in the Secretariat.

12. Finally, the Architecture Review Board is responsible for reviewing and formulating the enterprise architecture of the United Nations and associated standards and policies, and for providing recommendations to the Chief Information Technology Officer.

Role of the Chief Information Technology Officer

13. In accordance with the strategy, the Chief Information Technology Officer is the most senior manager responsible for leading all ICT activities globally in the Secretariat and for meeting the objectives of the strategy. The Chief's leadership role is a crucial component of governance framework in ensuring accountability to Member States.

14. For a successful implementation of the strategy, the legitimacy, authority and powers of the governance mechanism are to be clearly defined and accepted by all heads of business units. However, despite the crucial position occupied by the Chief Information Technology Officer in the revised strategy, the Board observed that the Secretary-General's bulletin (ST/SGB/2016/11) establishing the organizational structure and scope of activities of the Office of Information and Communications Technology, the role and responsibilities of Chief Information Technology Officer, regional technology centres, enterprise application centres and ICT units in the Secretariat was only issued on 21 September 2016, that is almost two years after the promulgation of the revised strategy. The Office of Information and Communications Technology confirmed that the existing Secretariat policies and

procedure have been updated in line with the revised strategy, but it also stated that delegation and designation policies had not been issued by the Secretary-General.

15. The absence of a formal legal authority for such a long period is not in the best interests of the implementation of the strategy.

Enhanced accountability

16. The alignment of the departmental business plans with the strategy is crucial to ensure its effective implementation. It also requires that the senior leaders in the Organization support ICT endeavours through their compacts[1] and that their expected accomplishments and performance measures be tied to their implementation of the strategy.

17. The Board observed that the performance measures for the implementation of the strategy indicated in the compact were very general in nature and not specific enough to facilitate the objective measurement of performance against the given criteria. The compact only reflected general high-level responsibilities that are not empirically and objectively assessable.

18. The Administration informed the Board that, in July 2015, the Office of Information and Communications Technology had promulgated and circulated the strategy guidelines to all heads of departments, setting out the actions that each entity was required to take for the successful implementation of the strategy. The Board observed that the offices and departments of the Secretariat and the field missions had not prepared annual ICT workplans setting targets for implementing the strategy and monitoring year-end results.

19. In the course of the audit, the Board observed that the Office of Information and Communications Technology could not make readily available the updated information (as of December 2016) on the status of implementation of the strategy in different departments and that the Office had to put in considerable effort to collect that information. There were no regular progress reports from different departments to the Office of Information and Communications Technology that would have enabled constant monitoring and the provision of timely guidance and intervention, where needed.

20. The Board is of the view that the lack of periodic reporting on the implementation of the strategy to the Office of Information and Communications Technology is bound to have an adverse impact on the capability of the bodies under the ICT governance framework and the Office of Information and Communications Technology to implement the strategy.

21. **The Board recommends that the Administration ensure that: (a) bodies under the ICT governance framework engage proactively in monitoring progress, resolving interdepartmental issues to ensure the implementation of the strategy in compliance with General Assembly resolution 69/262; (b) the performance measures in the senior managers' compact with regard to the strategy be made more objective and quantifiable; (c) immediate steps be taken to issue the necessary delegation and designation policies; and (d) departments submit road maps and take the steps necessary for aligning their business plans with the strategy.**

Project implementation

22. The strategy provided a road map for the implementation of key drivers, that is, modernization, transformation, innovation, governance and optimal use of ICT resources over the period covered by said strategy. In his first report on the status of implementation of the strategy, the Secretary-General reported a 45 per cent

completion of the strategic projects, the remaining 55 per cent being on schedule for completion. In his second report, he reported that 7 of the 20 projects had been completed. Of the remaining 13 projects, 10 had seen their scope modified or had been the subject of a request for modification that was pending with the Project Management Board for approval.

23. Modifications in the scope of nearly half of the strategic projects indicated that initial project formulation had not been comprehensive and that some activities and milestones might not have been included in project formulation.

Project delays

24. The Board observed that, of 20 strategic projects, 11 had time overruns, ranging from 12 to 54 months, compared with the original road map.

25. The Administration stated that the strategy had been approved only at the end of 2014 and that many of the dates indicated therein had been preliminary and affected by external factors. It added that the delays reflected only one aspect of implementation, that the strategy was dynamic and that, at the request of the Advisory Committee, a revised plan had been included in the first report on the status of implementation of the strategy.

26. The Board noted that, even when taking into account the revised timelines, six projects had been delayed beyond their expected completion dates. Moreover, three projects expected to be completed by March 2017 had achieved only a 65 to 70 per cent completion rate.

Monitoring of the strategic projects

27. Project monitoring involves continuous tracking of physical and financial progress to control time and cost overruns and execute the project in an economic, efficient and effective manner. However, the Board observed that, while the project timelines and the physical progress achieved in terms of percentage completion had been presented in both reports on the status of implementation of the strategy, details of project cost and financial progress against each of the 20 strategic projects had not been provided in either.

28. Furthermore, the Secretary-General had stated in his first report that all critical ICT projects were overseen by a newly established Enterprise Project Management Office, which tracked the progress of each project on a monthly basis by means of performance indicators, including with respect to scope, timelines, costs and human resources. The Enterprise Project Management Office is mandated to ensure that ICT investments are aligned with organizational goals and priorities, and its scope and function span the entire life cycle of a project, from the proposal stage (business case) to completion and benefit realization.

29. The Board, however, observed that the Enterprise Project Management Office and the Office of Information and Communications Technology were not monitoring the cost of implementation of the 20 ICT strategic projects, nor could they provide details of the estimated cost of each project and the progress of expenditure incurred against it, across the Secretariat. With regard to the review of the project cost and business case, the Enterprise Project Management Office stated that it was unable to carry out this task on account of limited resources.

30. The Administration stated that the cost overruns of projects were monitored by comparing budgets spent with actual budgets. It explained that a majority of the Office of Information and Communications Technology projects were undertaken using existing resources and that no additional budgets were applied to the projects.

Hence, it was added that, applying zero budgets, risks of cost overruns did not usually occur.

31. The reply received does not address the issue of monitoring the cost of the strategic projects and avoiding cost overruns. It is pertinent to point out that cost overrun is different from excess expenditure incurred against total budget approval for any organization in any particular year or biennium. The Board is of the view that each project has a specified project life cycle and a total cost of implementation, irrespective of whether it is funded from existing resources or whether additional budget is applied to the projects. There can be cost overruns in a project in case of: (a) delay in the implementation of projects resulting in cost escalations; (b) uneconomic and inefficient execution of the project; and (c) change in the scope of the project. In such cases, the actual cost incurred over the project life cycle may exceed the original estimated project cost, resulting in a cost overrun even where projects are executed using existing budgetary resources. In such cases, the project will utilize more resources than expected, adversely impacting other projects funded from the existing budget. The Board noted that the Office of Information and Communications Technology had not estimated the cost of implementation of each of the 20 strategic projects across the Secretariat and was not monitoring the progress of expenditure against them.

32. This is a weakness in the system of project assurance and project performance monitoring of ICT strategic projects, and there is a risk for project costs to escalate, owing to slippages in adhering to timelines, the uneconomic and inefficient execution of the projects, repeated modifications to or increase in the scope of projects, etc.

33. **The Board recommends that the Chief Information Technology Officer and the Office of Information and Communications Technology, as the central authority for implementation of the strategy and its monitoring, not only track the project timelines closely but also monitor the cost of each of the strategic projects to ensure transparency and accountability in substantial investments.**

Information and communications technology policies and procedures and compliance

34. The Chief Information Technology Officer has been assigned the overall responsibility under the strategy for establishing appropriate polices and standards on ICT matters. This is also articulated in the Secretary-General's bulletin of 21 September 2016 (ST/SGB/2016/11). Accordingly, the Office of Information and Communications Technology has issued an ICT policies manual, in which ICT policies are divided into eight categories, namely, acceptable use, asset management, applications, ICT governance, information management, infrastructure management, security and other categories. In his second report on the status of implementation of the strategy, the Secretary-General reported that a comprehensive body of 38 policies covering a range of ICT management topics had been issued.

35. However, policies on important subjects, such as information security, disaster recovery, cloud computing, minimum security for websites, videoconferencing, mobile devices, email services or remote access, remain to be promulgated or revised. The Board also observed that, at present, 8 policies are held at various levels in the Office of Information and Communications Technology and 18 more are due for "scheduled revision" by the ICT Policy Committee. The status of pending policies as of January 2017, as communicated by the Office, is included in annex III.

36. One of the 20 strategic projects concerns ICT policies and procedures and compliance. The project was aimed at developing and issuing a body of ICT policies and procedures by 30 September 2015. In his first report on the status of

implementation of the strategy, the Secretary-General reported an 81 per cent progress rate as of September 2015. In his second report, he stated that the project had been subsequently modified to include compliance with policies and procedures and that the completion date had been revised to 31 December 2016. The status of completion of this modified project with a revised scope is only 45 per cent, according to the status report on the project made available to the Board by the Office of Information and Communications Technology in January 2017, thus lagging behind the target completion date of 31 December 2016.

37. In his first report on the status of implementation of the strategy, the Secretary-General explained that an ICT policy compliance function was being established as part of the self-regulatory initiative to provide support for supervisors in carrying out their management responsibilities. In his second report, he stated again that a policy compliance function to monitor, measure and report on policy implementation had been instigated.

38. In response to the Board's request for information on the system that had been put in place to review, monitor and ensure compliance with ICT policies across all departments and duty stations, the Office of Information and Communications Technology indicated that compliance management for all ICT functions had not been fully implemented, owing to a lack of resources. The Administration also recognized that much needed to be done but added that, given the current constraints, the highest possible level of compliance had been achieved.

39. The Board is of the view that continued monitoring and enforcement of compliance with all ICT policies across the departments and duty stations are essential to ensure the standardized management of ICT resources and improve a coordinated use of ICT in the Organization.

40. **The Board recommends that the Office of Information and Communications Technology complete the task of formulating and promulgating ICT policies in a time-bound manner and establish the proposed self-regulatory compliance function.**

Information and communications technology human resources

41. The strategy recognizes that ICT staff and their expertise are important assets in the implementation of the strategy and that performance management and training of staff are codependent. In accordance with the strategy, the Office of Information and Communications Technology is required to work with the Office of Human Resources Management to create requisite training programmes to promote technical skills as the basis for career progression, since development and training must be geared towards producing a highly skilled and motivated ICT workforce. The Office of Information and Communications Technology is also to consult the Office of Human Resources Management in relation to the creation of new generic job profiles and standard job profiles on the basis of the revised ICT needs and career paths; reclassifying ICT staff positions to ensure that the Organization adapts properly to emerging technology, and establishing a training and mobility programme for ICT personnel.

42. In the first report on the status of implementation of the strategy, emphasis was put on regularly assessing new technology and reinforcing training as one of the important activities necessary to align ICT with the United Nations' goals. In the second report, the Secretary-General provided information on career development and training for ICT staff, as well as on ICT workforce in non-peacekeeping offices and peacekeeping operations. He also stated that strategic skills for, inter alia, enterprise architects, business architects, process engineers, scenario focus engineers, solution architects and information architects needed to be built by ICT

entities through training and skill upgrades. Emphasis was also placed on maintaining in-house expert capacity for sustainable support and the maintenance of enterprise systems for optimal resource management.

43. In response to queries on the details of short-term, medium-term and long-term training plans, training needs analyses carried out, capacity gaps identified, training programmes developed and trainings conducted, among others, the Administration stated that training plans were developed but could not be implemented owing to a lack of resources. It was stated that, in 2015, $593,000 had been requested for training in substantive and technical ICT skills, but that only $27,400 (4.62 per cent) had been provided, which had been spent on an Information Technology Infrastructure Library certification request for 2015. As regards 2016, it was stated that, to upgrade substantive and technical IT skills, $681,241 had been required, but that only $29,509 (4.33 per cent) had been approved and that all had been spent.

44. The reply summarized above indicates that there is a shortfall in the achievement of planned targets for building capacity in substantive and technical IT skills. The lack of technical and substantive training provided to ICT staff may result in competency gaps, affect the organizational efficiency in terms of service delivery and lead to the non-realization of the full benefits of the implementation of the strategy. Furthermore, the Board observed that no road map had been prepared to provide visibility in the future plan of action to actions that would bridge the competency gaps by imparting requisite training programmes to staff in a manner matching the pace of modernization of ICT networks and infrastructure, the deployment of various enterprise applications and the consolidation and rationalization of ICT resources across the Secretariat.

45. **The Board recommends that the Administration ensure that sufficient funds are earmarked for implementing the training plan.**

Performance management framework

46. The strategy states that the Secretariat has created an ICT performance management framework, which the Office of Information and Communications Technology started implementing in 2013. It also states that the framework will provide the basis for optimizing and harmonizing ICT assets, projects, services and support, and a means for aligning the performance of ICT with the business needs of the Organization.

47. Upon its request for details of the ICT performance management framework, the Board received a copy of a draft performance management plan. The Administration stated that it was not fully implemented, owing to a lack of resources.

48. The Administration elaborated that, at present, it did not have an ICT policy compliance function in place, owing to a lack of resources. It added that, in 2017, a scorecard methodology would be developed to measure the performance of ICT units covering all ICT functions and that this methodology would rely on key metrics and self-reporting. This would be enhanced by in-depth reviews of areas of concern. This methodology was under development and was taking into account the industry's best practices. The Administration expected to fully implement this approach in line with the strategy implementation.

49. The reply of the Administration confirms that the performance management framework is still being developed, on the basis of a scorecard methodology. The Administration concurred with the Board, while adding that there existed multiple competing priorities.

50. **The Board recommends that the formulation and implementation of the ICT performance management framework be expedited.**

C. Modernization activities

Information security

51. The information security framework proposed under the strategy committed to covering the areas of full visibility of ICT assets, the establishment of an intrusion detection service, vulnerability management, policy development, compliance and enforcement, intelligence sharing, data classification schemes and privacy policy, security architecture and application development, and enhancements to security infrastructure. In the strategy, it is also proposed that the central authority for information security be vested in the Chief Information Technology Officer.

52. In his first report on the status of implementation of the ICT strategy, the Secretary-General reported a 60 per cent completion rate for the strategic project for information security, originally scheduled for completion by 31 December 2015. The Board had noted in its previous report (A/70/581) an overall achievement of 62.5 per cent of the project, with four initiatives completed and six indicated as ongoing but on track. According to the second report, the completion rate had reached 65 per cent. The key milestones relating to mandatory security awareness training, email filtering and intrusion detection were stated to have been achieved. The Board therefore noted that a mere 5 per cent progress rate had been achieved in 2016.

53. The Administration informed the Board that it recognized that more complex elements of the plan to strengthen information security across the Secretariat required sustained effort and could not be fully implemented as a one-time project. It added that, given the high degree of fragmentation, progress in the implementation of the action plan was contingent on the level of visibility and access shared by offices and departments.

54. The Board observed that the completion rates of mandatory information security awareness training ranged from 0 to 6 per cent among senior officials (Under-Secretaries-General and Assistant Secretaries-General), 0 to 25 per cent among Professionals and above, and 0 to 34 per cent among remaining staff. Even in the Office of Information and Communications Technology, the mandatory information security awareness training had not been taken by all staff, with completion rates ranging from 0 to 53 per cent among Professionals and above, and 0 to 40 per cent among remaining staff.

55. **The Board recommends that the Administration ensure that all personnel complete the mandatory information security training.**

56. The Administration stated that, in 2016, more than 17,000 staff members had completed the course and that it should be feasible to reach a 90 per cent rate of completion among staff by the end of 2017.

Network segmentation

57. One of the initiatives under the strategic project on information security is network security and the segmentation of network zones. The Board noted that network segmentation had been implemented in the enterprise data centres as well as at the Headquarters data centres (in New York and New Jersey, United States of America), and that implementation at other data centres was ongoing, with plans being prepared to extend network segmentation to end-users segments. The Board observed that the initiative of network segmentation had been originally scheduled

for completion by 31 December 2015, and later extended to 31 December 2016. This initiative is still under implementation.

58. The Administration stated that, in line with the strategic goal of a reduction of data centres, network segmentation was only planned to be implemented in those data centres that were expected to be retained, as well as in campus networks that connected end-user devices, and for non-traditional ICT systems, such as those used for security or facilities management. The Board noted that, since the promulgation of the strategy, the number of data centres had been reduced from 102 to 86, implying that network segmentation still remained to be implemented in those 86 data centres.

Classify information assets

59. The Administration informed the Board that a memorandum had been issued to assign specific responsibilities for information classifications to departments and offices and that, as from 1 January 2017, all information that had not been classified as either "confidential" or "strictly confidential" would be treated as unclassified. It added that, as unclassified content was not explicitly marked, it was not in a position to determine the level to which content owners complied with the policy. The Board observed that, although the responsibility to classify information on the basis of its sensitivity had been assigned to the departments and offices, there was no assurance that those had classified all information in line with its security or sensitivity level, given the non-availability of a function to verify compliance. Delay in classification of the information assets and the absence of a compliance function carried the risk of exposing significant sensitive information assets.

60. **The Board recommends that the Office of Information and Communications Technology create a mechanism for departments and offices to provide periodical updates on the implementation of the strategic project on information security.**

Disaster recovery and business continuity

61. Information technology disaster recovery is one of the core elements of the organizational resilience management system of the Secretariat, approved by the General Assembly in resolution 67/254 A. The strategy proposes to strengthen the information technology disaster recovery process in accordance with the decisions of the Assembly and the recommendations of the Board.

62. In 2014 and 2015, 171 critical systems and applications supporting critical processes were identified as part of the implementation of the operational resilience management system across the Secretariat. Of those, only 34 applications had fully documented and tested disaster recovery plans with capability to be restored within 24 hours of any incident that would render the application unusable.

63. Considering the risk involved in the lack of adequate disaster recovery arrangements in such a large number of critical systems, the Senior Emergency Policy Team decided in July 2015 to review the list of critical applications in accordance with the Organization's established criteria, with a view to reducing the total number to approximately 20 critical applications, in line with common best practices for similarly sized organizations. Accordingly, the Office of Information and Communications Technology, in consultation with other departments and offices, drew a list of 24 critical applications, which was sent to all heads of departments and offices in November 2015. The Office of Information and Communications Technology stated that disaster recovery plans had been prepared and were in place for 21 of the 24 critical applications.

64. Upon analysis of the original list of 171 critical systems and applications, the Board observed that 17 "mission-critical" applications relating to the Department of Field Support had not been considered as critical and, therefore, had not been included in the final list of 24 critical applications requiring disaster recovery plans. Similarly, about 40 applications proposed to be replaced by other systems had not been classified as critical.

65. The Board is of the opinion that, given the fragmented nature and size of the United Nations systems, the criteria based on a fixed number of applications for determining criticality may not be appropriate, as several applications that are critical yet not enterprise-level may get excluded from the disaster recovery mechanisms.

66. The Board is also of the view that, until the applications are consolidated, they remain critical and the status of replacement of such applications needs to be closely monitored. The Board is therefore of the opinion that a further review of applications should take place to clearly establish the actual number of critical applications on the basis of business to date.

67. **The Board recommends that: (a) the criteria for determining the criticality of applications be reviewed and the number of critical applications be ascertained on the basis of an analysis; and (b) the number of critical applications be progressively reduced by replacing them with new systems and enterprise-level applications through consolidation and rationalization.**

D. Transformation activities

Enterprise delivery framework

Application management

68. Numerous application centres in the Organization worked independently and lacked the security required for their scale of work and responsibilities. To address this issue, it was proposed in the strategy that the then existing application centres in New York, Bangkok and Vienna be strengthened and that their facilities become enterprise application centres. Such centres have since been established in those three duty stations to provide a focal point for application development, thereby preventing fragmentation.

69. Lack of control over applications exposes the Organization to security risks and increases the risk of duplicating expenditure. In its previous reports, the Board had determined that the Administration had no overall software application strategy and that many of the applications in use across the Secretariat had been developed locally and performed redundant functions. In response to those concerns, the Chief Information Technology Officer introduced an application management strategy in May 2015.

70. A global United Nations application portfolio has since been published, wherein the applications in use across the Organization have been identified to a large extent, though not fully.

71. In his first report on the status of implementation of the strategy, the Secretary-General reported that phase I of the strategic project on application consolidation and rationalization had been completed in July 2015.

72. In his second report, he reported that, since 2014, the number of applications had been reduced from 2,340 to 1,652 through planned consolidation and migration, and that the goal was to further reduce their number to 1,000 by the end of 2020. In addition, he stated that new standard applications had been delivered in various

areas, including modern administrative and collaborative solutions, workflow systems and solutions to support the work of the United Nations and field systems.

73. The consolidated status of application rationalization as at 8 February 2017 and as communicated by the Office of Information and Communications Technology is provided in annex IV. The data indicate 2,416 applications, as opposed to the 2,340 referred to in the second status report. Analysis of the data showed that 695 of the 2,416 applications listed did not have defined timelines for consolidation and that 46 applications were yet to be reviewed and road maps identified for rationalization. The Board noted that the application management strategy referred only to a broader plan (2016-2020) to defragment and rationalize existing applications and did not detail specific measurable financial and technical resource requirements and institutional arrangements.

Website rationalization

74. In his first report on the status of implementation of the strategy, the Secretary-General described milestone activities for the website consolidation and rationalization project, such as developing a website technology strategy and plan, developing a United Nations website consolidation solution, harmonization and identifying and remediating websites, with a timeline for completion of November 2017. He reported a 42 per cent completion rate of the project. However, the Board noted that the second report did not mention the project.

75. It is indicated in the status report on the global strategy projects that, as at 25 January 2017, phase I of the website harmonization project had been completed, a website technology strategy and plan had been prepared, a United Nations website consolidation solution had been developed and a high-level site review and level 1-4 site harmonization had been completed. However, phase II of the website rationalization process is yet to commence. There are around 1,300 websites maintained across the Organization, the majority of which lack standardization and are not in compliance with the ICT policies on public websites, exposing the entire network to serious security risks. Given the significant security implications, progress in website rationalization and consolidation is not satisfactory.

76. The Administration stated that website rationalization relied on offices and departments implementing the strategy and transitioning to an enterprise approach. It added that the consolidation of ICT systems was a pre-requisite for website rationalization.

77. **The Board recommends that progress in website rationalization and harmonization and application rationalization and consolidation be expedited to mitigate security risks, reduce costs and optimize application value.**

Enterprise help desk

78. In the strategy, it is proposed to harmonize help-desk functions to transform them into a global, cost-effective and more efficient shared-service model, which will provide global around-the-clock coverage, along with the regional technology centres. These global shared-service centres, known as enterprise service desks, are required to support enterprise-wide applications and infrastructure. The establishment of standards for tracking problems and reporting is integral to the successful implementation of an enterprise application.

79. As proposed in the strategy, the enterprise service desk called the Unite Service Desk first became operational in Bangkok in September 2014, followed by similar desks in Nairobi, Geneva, New York and Brindisi, Italy. These five hubs

serve as a single point of contact for service requests, problem reporting or enquiries for all key enterprise ICT applications.

80. The Unite Service Desk has adopted the Information Technology Infrastructure Library framework for the management of users' requests concerning enterprise applications, establishing different processes for handling incidents (e.g. incident management), requests for service (e.g. request fulfilment management) and problems (e.g. problem management).

First-level resolution rate

81. The first-level resolution rate is the percentage of contacts that are resolved by the service desk upon first interaction with the customer. The first-level resolution rate is a measure of how effectively the service desk conducts its business. The Board obtained the data of service requests to the Unite Service Desk for the years 2015 and 2016 from the Administration. The analysis of the data is presented below.

82. The Board noted that the Administration measured the first-level resolution rate as the total number of tickets resolved at the first level divided by the total number of tickets that could potentially be resolved at the first level. The Board also observed that the Administration had only considered incidents for calculating the first-level resolution rate and had excluded requests for service from the purview, on the assumption that all requests for service were resolvable at the second level only.

83. The Board holds that, by excluding all requests for service tickets, the calculation made by the Administration may not depict the right picture, as such tickets may include requests that could still be potentially resolvable at the first level, provided that the Administration had developed standardized rules for requests for service. The measure adopted by the Administration needs to be refined to define the requests for service that are resolvable at the first level.

84. An analysis by hub of first-level resolution rates indicated that the performance of Unite Service Desks in Geneva and New York in resolving service requests at the first level was below the performance of other Unite Service Desks, as shown in the table below.

Analysis by hub of the Unite Service Desks' performance

Assigned to group	*First-level resolution rate (2016)*
All **Unite Service Desks**	80 per cent
Unite Service Desk in **Bangkok**	81 per cent
Unite Service Desk in **Geneva**	65 per cent
Unite Service Desk in **Nairobi**	87 per cent
Unite Service Desk in **New York**	76 per cent

Source: Analysis of data held by the Unite Service Desk.

85. The differences in the first-level resolution rates point towards variations in the level of capability of the different service desk hubs (including the agents) to handle tickets.

86. **The Board recommends that the Administration devise a first-level resolution rate measure by classifying the requests for services that could potentially be resolved at the first level.**

E. Innovation

87. In accordance with the strategy, there are many ways in which ICT is going to have an impact on how the United Nations is expected to work, in relation to, for instance, field commodity management; fibre optics and digitization; enterprise computing; mobile technology, mobile solutions and cloud computing; and the analysis of data for tracking and early detection purposes. The Organization should expect ICT to be open to technological advances to support the substantive work of the United Nations. It was also envisaged that the Office of Information and Communications Technology would explore opportunities to develop capacity in analytics and potential means of collaboration with United Nations entities throughout the global ICT community on the development of analytics solutions to allow for operational flexibility in support of the delivery of their mandates. The strategy specifically introduces innovation as phase II of the road map, to bring the Organization up to date with other appropriate modern ICT practices in the long term, beginning January 2015.

Plan for innovation

88. In his second report on the status of implementation of the strategy, the Secretary-General described the progress made in the development of tools to inform policy decisions among Member States, enabling a multidimensional analysis of development based on economic, social and environmental factors. In his second report, he listed a coherent set of innovative technology tools to support organizational priorities as part of a vision of the digital future of the United Nations.

89. In response to the Board's enquiries, the Administration submitted a business intelligence and analytics white paper and stated that the difficulties in implementation were due to the high degree of system fragmentation, reluctance to share data and the lack of governance in system development. The Board observed that a white paper was not a substitute for a well-laid-out concrete plan detailing resource requirements, arrangements and timelines. The Administration stated that the stage of implementation of the strategy did not correspond to mature and well-established innovation activities. It added that the fact that no concrete and detailed plan had been provided was in keeping with the strategy implementation, which established innovation as its phase II.

90. In response to the enquiries by the Board regarding the method, process and rationale for identifying technology and a plan of action for its implementation, the Administration stated that the Office of Information and Communications Technology would work on innovation in future as progress has been achieved in the consolidation process.

91. The Control Objectives for Information and Related Technology (COBIT)[2] best practices envisage that innovative technology must be identified, proof of concept tests carried out and utility assessed before it is implemented. The Administration stated that the innovation initiatives that it had undertaken were isolated innovations and not based on any standards, including COBIT. The Board observed that, after identifying a few emerging technology areas, nothing further had been done. However, the Board noted that the Office of Information and Communications Technology had employed creative solutions, such as public competitions, to build analytic tools. The Board appreciates the efforts of the Administration and urges it to continue to adopt innovative approaches to establish and sustain an environment favourable to innovation in analytics and other technological innovative areas.

92. **The Board recommends that the Office of Information and Communications Technology develop a detailed plan of action on innovative emerging technology in consultation with stakeholders.**

93. In response, the Administration stated that a strategy and action plan would be developed as part of phase II of the implementation of the ICT strategy and that it was contingent on progress in consolidation and the availability of resources to ensure a successful implementation.

F. Optimal use of information and communications technology resources

94. In the strategy, three areas are identified for ensuring an optimal use of ICT resources: (a) strict governance and a review process regarding ICT investments; (b) standardized and centralized products and services; and (c) defragmentation, the retirement of systems and global sourcing. The strategy places an important responsibility on the Office of Information and Communications Technology to ensure that all ICT plans, investments and plan implementation are subject to strict governance and review processes. ICT investments must focus on standardized products and services in order to realize benefits in core services and to allocate resources so that they meet the needs of the Organization in an optimal fashion. The strategy also emphasizes that the Office of Information and Communications Technology should oversee and monitor ICT investments to enable more informed decision-making and a holistic reporting of global costs. It envisages that Umoja should be a lever for presenting more consolidated ICT financial information. Furthermore, ICT governance in the United Nations requires that any planned ICT initiative that is expected to result in an expenditure of more than $200,000 be subject to governance.

95. The Administration informed the Board that the implementation of Umoja made the systematization of ICT governance possible in a manner that allowed offices and departments to utilize their funds while making ICT expenditure subject to governance. The implementation of a mandatory approval step in Umoja prior to the certification of funds would ensure the examination of all ICT expenditure for compliance with the strategy, standards, architecture and information security requirements.

96. The Administration stated that the acquisition of goods and services was undertaken by the Procurement Division at Headquarters and by the procurement units in offices away from Headquarters, economic commissions and field missions under delegated authority, in compliance with the Financial Regulations and Rules. It added that the Procurement Division communicated only large or unusual ICT procurement exercises to the Office of Information and Communications Technology for governance, and principally as professional courtesy. It also stated that procurement units throughout the Secretariat were not subject to central review or governance.

97. The reply of the Administration shows that little action has been taken to implement the provisions of the strategy. The policies and procedures governing ICT procurements have not been fully aligned with those provisions and, therefore, all ICT procurements are not subject to governance and central review, as envisaged in the strategy. This raises the risk of large ICT investments being made in non-standardized products and services and of the benefits of global sourcing not being achieved fully, in addition to continued fragmentation of ICT across the Secretariat.

98. The Administration informed the Board that it had promulgated guidelines shortly after the implementation of the strategy in addition to issuing guidelines specifically related to the budget process of the Office of Programme, Planning, Budget and Accounts. It added that governance was established in an administrative instruction as well as a Secretary-General's bulletin. It also stated that the issue was not so much one of lack of mechanisms but one of lack of compliance, and added that the budget process managed by the Office of Programme, Planning, Budget and Accounts did not recognize or require ICT governance as part of the budget process.

99. The Board also observed that, with the deployment of a procurement functionality in Umoja, monitoring, oversight and a central review of all ICT investments should not be difficult to implement by the Office of Information and Communications Technology. The Administration stated that the heads of departments were responsible for ensuring ICT initiatives, and that budgets were submitted to the Office of Information and Communications Technology as part of the governance activities. It added that the Office of Information and Communications Technology did not currently have the resources to monitor effectively overall compliance with the strategy across the Secretariat. It stated that the lack of compliance that had been identified would not be addressed by requiring the Office of Information and Communications Technology to strengthen oversight alone, and that it could only be addressed if the system (Umoja) required it. The reply of the Administration confirms that the provisions of the strategy regarding governance and the review of ICT investments and increased focus on standardized and centralized products and services have not been fully implemented.

Global sourcing

100. In the strategy, the Office of Information and Communications Technology is required to focus on defragmentation, the retirement of systems and global sourcing to ensure that all ICT resources are optimally managed. The strategy, inter alia, envisaged a central capacity located in the Office of Information and Communications Technology and involving departmental participation, that would be dedicated to managing global contracts and effective governance. The two primary target areas of the global sourcing strategy would be voice and data communications and the purchase of hardware and software licences, and the negotiation of contract discounts using the global purchasing volume of the United Nations system.

101. In his second report on the status of implementation of the strategy, the Secretary-General stated that the Organization negotiated discounts in the areas of infrastructure, externally acquired licences and related ICT, such as application development and maintenance services. The Secretary-General underlined that there was potential for implementing global sourcing through the consistent and effective use of systems contracts and enterprise agreements.

102. The Board requested the Administration to furnish details of discounts negotiated and price reductions obtained during 2015 and 2016 through global sourcing in the areas of infrastructure, externally acquired licences and related ICT services. The Administration informed the Board that global rates were in place for contracts for global sourcing for labour, and for global sourcing for licensing, but could not provide details of the discounts. It stated that the Office of Information and Communications Technology was not authorized to engage in negotiations with vendors in relation to discounts and that the contracts were negotiated by the Procurement Division. It added that, in many cases, discounts could not be determined as a similar service to compare the new pricing with was typically not provided before, and that the high degree of fragmentation meant that previous services and costs were not visible to the Office of Information and Communications Technology for comparison purposes. The Administration also

informed the Board that it had not done a comprehensive analysis of discounts and that, at present, it did not have any ICT resource optimization plan.

103. With regard to switching over from individual to enterprise licensing, it was stated that the Office of Information and Communications Technology and other ICT entities in the Secretariat regularly used the systems contract modality to ensure a streamlined procurement of standard technology and software licences, which was managed by the Procurement Division. This procurement approach ensured that the Organization availed itself of the most attractive licensing options from an enterprise licensing perspective. All those licences were drawn up as enterprise agreements which were available to all Secretariat ICT entities, providing a pre-agreed price with uniform global pricing. This was an established procurement process that was used on a regular basis in conformity with the procurement rules and regulations. The Administration added that the systems contracts had been in place for many years and that, consequently, a road map was not required.

104. The Board noted that the reply was not consistent with the assertion made in the second report on the status of implementation of the strategy that there was potential to implement global sourcing through the consistent and effective use of systems contracts and enterprise agreements. In the absence of any analysis of discounts obtained through global sourcing, it was not possible to make an objective assessment of the progress achieved in implementing global sourcing and optimizing the cost of ICT assets by means of discounts.

105. **The Board recommends that the relevant policies be suitably revised to ensure that ICT procurements above a prescribed threshold are processed through Umoja and vetted centrally by the Office of Information and Communications Technology to ensure uniformity, standardization, compliance with ICT policies and benchmarking of costs.**

106. **The Board also recommends that a clear road map be developed to realize cost optimization benefits through global sourcing.**

Defragmentation of information and communications technology resources

107. In the strategy, it was emphasized that, as part of its improved stewardship, the Office of Information and Communications Technology would focus on defragmentation, the retirement of systems and global sourcing to ensure that all ICT resources were optimally managed. To reduce the fragmentation of ICT resources across the secretariat, the strategy provided for the implementation of an enterprise delivery framework, which involved the following:

- Transitioning data centres to the enterprise data centres in Brindisi and Valencia, Spain
- Deploying applications through the enterprise application centres in Bangkok, New York and Vienna
- Consolidating 131 service desks across the Secretariat to enterprise service desks, with five hubs (in Bangkok, Brindisi, Geneva, Nairobi and New York)

108. In his second report on the status of implementation of the strategy, the Secretary-General indicated that, during 2015 and 2016, the Office of Information and Communications Technology had fully integrated the Broadcast and Conference Support Section (formerly of the Office of Central Support Services) and partially integrated the Human Resources Services Section (in the Office of Human Resources Management) and the Financial Information Operations Service (in the Office of Programme Planning, Budget and Accounts) within the Department of Management. Ongoing consolidation with respect to the Department for General

Assembly and Conference Management, the Department of Safety and Security and the remaining offices in the Department of Management would allow for further integration of ICT posts.

109. Although there are more than 70 ICT units in the Secretariat's departments and offices across the world, only three have been completely consolidated so far. Furthermore, the Chef de Cabinet issued in February 2016 an inter-office memorandum to the Under-Secretaries-General of all the departments and heads of offices to cooperate and help to transition ICT functions to the enterprise delivery framework, and to work on the process of identifying and defragmenting internal departmental ICT functions and transitioning them and corresponding resources to the Office of Information and Communications Technology. He also enclosed a high-level schedule for the implementation of the strategy and the time frame for harmonization efforts, which are central to the strategy implementation.

110. The Board observed that, despite very specific resolutions of the General Assembly (69/262, sect. II, and 70/248 A, sect. V), the recommendations of the Advisory Committee (see A/70/7/Add.18, paras. 37-39) and the memorandum of the Chef de Cabinet, progress in the defragmentation of ICT resources across the Secretariat has been very slow. The strategy has to be implemented in a period of five years (2014-2019), in accordance with the road map, but only 3 out of the more than 70 ICT units had been brought on the enterprise delivery framework as of January 2017. The process of consolidating ICT units had not made significant progress in any of the four regions (Africa, the Americas, Asia and Europe). Even the Department of Management, which is responsible for implementing the strategy across the Secretariat through its Office of Information and Communications Technology, had not consolidated all its ICT units into the enterprise delivery framework.

111. In its resolution 71/272 B, the General Assembly reiterated its request that the Secretary-General continue his efforts to reduce the level of fragmentation of the current ICT environment across the Secretariat and at all duty stations and field missions.

112. **The Board recommends that the Administration take effective steps to ensure the implementation of the enterprise delivery framework and reduce the fragmentation of ICT resources.**

IV. Acknowledgements

113. The Board wishes to express its appreciation for the cooperation and assistance extended to its staff by the Under-Secretary-General for Management, the Communications and Information Technology Officer, the Office of Information and Communications Technology and members of their staff.

(*Signed*) Shashi Kant **Sharma**
Comptroller and Auditor General of India
Chair of the Board of Auditors
(Lead Auditor)

(*Signed*) Mussa Juma **Assad**
Controller and Auditor General of the
United Republic of Tanzania

(*Signed*) Kay **Scheller**
President of the German Federal Court of Auditors

Annex I

Status of implementation of the recommendations on information and communications technology affairs

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
A/70/581, summary, recommendation (a)	The Administration clarify the role and authority of the Chief Information Technology Officer in field operations by setting out clearly which activities require strong central control and which activities require or merit operational freedom	The Secretary-General bulletin on the organization of the Office of Information and Communications Technology was signed by the Secretary-General, with an effective date of 20 September 2016. It clarifies the role and authority of the Chief Information Technology Officer in all ICT matters, including field missions The Administration suggests that the status of the recommendation be changed to "implemented"	The Board notes the response and considers that the recommendation is still under implementation as the formal delegation of authority to the Chief Information Technology Officer and system for delegation and the designation of ICT functions and authority in the Office of Information and Communications Technology are yet to be notified and implemented		X		
A/70/581, summary, recommendation (b)	The Administration reassess the realism of the timetable for implementing the strategy and strengthen the project management approach, including the introduction of independent assurance arrangements	The project management approach is being further strengthened with the proposal to include agile methodology in addition to PRINCE2 to enable more flexibility in ICT projects, with a view to achieving realism in terms of timetables The Administration suggests that the status of the recommendation be changed to "implemented"	The Board considers that the recommendation is still under implementation. Independent assurance arrangements have not been made		X		
A/70/581, summary, recommendation (c)	The Administration, as a matter of urgency, formalize corporate ICT policies and procedures, including governance structures and appropriate delegations of authority, to ensure that the necessary authorities and accountabilities are in place to support the	The Office of Information and Communications Technology is in the process of formulating a new more agile and effective governance framework and the system for delegation and designation of ICT functions and authority. It is expected that governance and delegation will be established and implemented in 2017	The Board considers that the recommendation is still under implementation. The delegation of authority is still to be issued		X		

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
	implementation of the ICT strategy						
A/70/581, summary, recommendation (d)	The Administration establish a robust compliance framework with the necessary authorities to ensure adherence to Secretariat-wide ICT policies, including those on information security	The Office of Information and Communications Technology is reviewing implementation of an ICT scorecard for measuring performance and compliance in a consistent manner across the Secretariat for all ICT operations	Self-reporting compliance function are still to be introduced		X		
A/70/581, summary, recommendation (e)	The Administration further refine and improve the quality of the data underpinning the five-year forecast of ICT expenditure by increasing visibility of actual expenditure and the status of ICT assets across all of the Secretariat, including peacekeeping operations	The complete analysis of financial data, including data on planning assumptions from the Department of Field Support, was included in the report of the Secretary-General for the seventy-first session of the General Assembly (A/71/400) The Administration suggests that the status of the recommendation be changed to "implemented"	Under implementation There is no visibility of ICT assets procured from non-ICT funds and budgets		X		
A/70/581, summary, recommendation (f)	The Administration develop a statement of the expected costs and benefits of implementing the revised ICT strategy to enable strategic activities to be prioritized and resourced appropriately	The report of the Secretary-General on the ICT strategy for the seventy-first session has been issued and includes the expected costs and benefits	Under implementation There is no assessment of the total cost of implementation of the ICT strategy across the Secretariat. No benefit realization plan has been prepared and there is no monitoring of the cost of the strategic projects		X		

Report reference	Summary of recommendation	Administration's comments on status	Board's comments on status	Fully implemented	Under implementation	Not implemented	Overtaken by events
A/70/581, summary, recommendation (g)	The Administration increase the visibility of senior management in leading the implementation of the ICT strategy to ensure that all departments are committed to implementing the revised ICT strategy as mandated by the General Assembly, and that any disagreements or impediments to implementing the strategy are addressed and resolved in a timely manner	The Office of Information and Communications Technology, in addition to the ICT Executive Committee and the Management Committee, has initiated business relationship management and executive briefings to ensure that offices and departments are committed to implementing the revised ICT strategy	Under implementation Departmental business plans are still not aligned with the ICT strategy		X		
A/67/651, para. 20	The Administration develop a new ICT strategy, including a United Nations-wide information strategy and an enterprise architecture framework, that describes how information and technology will support and provide benefits for the Organization. Such a strategy needs to be consistent with United Nations objectives and realistic ambitions for transformation. The Administration then needs to make progress in the implementation of the ICT strategy in parallel with any agreed reforms to the	The report of the Secretary-General for the seventy-first session provides details on progress with the implementation of the new ICT strategy	A revised ICT strategy has been developed and was approved by the General Assembly in resolution 69/262 For this recommendation to be implemented, the Administration needs to clearly articulate: (a) how implementing the strategy will enable United Nations entities to better deliver their mandates; and (b) the alignment between the ICT strategy and other transformation initiatives The report of the Secretary-General shows that efforts have been made to align transformation initiatives and the ICT strategy. The ICT strategy is under implementation		X		

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
	Organization's operating model, culture and approach						
A/67/651, para. 29	The Administration review its arrangements for capturing information on ICT expenditure with a view to enabling more effective monitoring of costs and improved decision-making on future expenditure	All expenditure was captured by the Programme Planning and Budget Division, and all ICT commitment items were captured for the regular budget and special political missions. The methodology used is disclosed in document A/71/400. Resources are distributed and budgets are managed at a cost-centre level, which represents functional or business areas within the Office of Information and Communications Technology The Administration suggests that the status of the recommendation be changed to "implemented"	The Board notes the Administration's response and considers that this recommendation is still under implementation		X		
A/67/651, para. 30	The Administration clearly specify how the chart of accounts in Umoja will enable ICT expenditure to be captured and monitored effectively. In addition, the Administration should consider whether there are any options for improving management information on ICT expenditure that could be pursued prior to the implementation of Umoja	The data reported in the progress report reflect changes in the chart of accounts, as ICT expenditure was captured by analysing commitment item data. Financial and human resources data were consolidated and synthesized. The Office of Information and Communications Technology will continue to work on producing overall financial reports for the Office of Programme, Planning, Budget and Accounts of the Department of Management The Administration suggests that the status of the recommendation be changed to "implemented"	The Board observed that there were still ongoing issues with the monitoring of costs and considers that this recommendation is still under implementation		X		

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
A/67/651, para. 31	In order to enable greater consistency and transparency with regard to ICT funding and budgets and allow better management of costs and effective prioritization, the Controller require that proposed ICT budgets set out: (a) the cost of running day-to-day services; (b) the cost of licences and maintenance costs for existing systems; (c) costs related to upgrading existing service delivery (e.g. to improve security); and (d) new costs, including strategic requirements	A memorandum on resource planning was issued for all departments to present their requirements to the regional technology centres and enterprise application centres and to ensure full transparency in ICT requirements and funding that they would be requesting The Administration suggests that the status of the recommendation be changed to "implemented"	The Administration's response does not fully address the recommendation. The Board considers this recommendation to be under implementation until such time that the compliance of such initiatives crystalizes into periodic reports		X		
A/67/651, para. 32	The entities, offices and programmes comprising the United Nations prioritize ICT funding to ensure that the right balance of attention is given to transformation, improvement and leadership, frameworks and policies, and operational services	Guidelines on resources planning have been issued in coordination with the Office of the Controller and the Programme Planning and Budget Division. All departments are required to submit their requirements to the Office of Information and Communications Technology for technical review. Departments will be developing their budget proposals upon technical clearance and under guidance from the Chief Information Technology Officer The Administration suggests that the status of the recommendation be changed to "implemented"	The Board notes the Administration's response and considers this recommendation to be under implementation		X		

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
A/67/651, para. 39	As a necessary precursor to any new ICT strategy, and to reduce the substantial risks associated with the implementation of a global enterprise resource planning system, the Administration clearly document those elements of the culture, custom, practices and processes, as well as key cost and performance information, that may affect the achievability of a global ICT transformation in the United Nations. Using the results of this review, the Administration should define the Organization's overall objectives and specify realistic ambitions for global service delivery, consistent processes and a unified Organization	Umoja mainstreaming planning takes into account organizational challenges across the Secretariat. Starting with the Unite Service Desk, as the Office of Information and Communications Technology moves into other areas, it is being carefully planned at the level of every component of mainstreaming activity	The Board notes the Administration's response and considers this recommendation to be under implementation		X		
A/67/651, para. 41	The Administration recognize the changes in responsibilities and operating model across the Secretariat that are needed to deliver any new ICT strategy and accept the responsibility of senior management as a whole to deliver	The Secretary-General's bulletin on the organization of the Office of Information and Communications Technology is effective 20 September 2016 and establishes the changes in the operating model and responsibilities. The responsibilities of senior management in the implementation of the ICT strategy are incorporated in the Secretary-General's compact	The Board notes the Administration's response. The Board observed that the performance measurements for the implementation of the ICT strategy indicated in the compact were very general in nature and not specific enough to facilitate the objective measurement of the performance against the given criteria, and thus considers this recommendation to be under implementation		X		

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
	Organization-wide changes to support the Chief Information Technology Officer						
A/67/651, para. 50	The Administration: (a) emphasize the strategic priorities of the Chief Information Technology Officer by redefining the functions of the role and changing the title; (b) evaluate whether there is a need to appoint a chief technology officer or designate an existing post to assist the chief information officer in operational matters; and (c) clearly define and communicate the different roles across the Secretariat, in particular the scope and remit of the renamed chief information officer with regard to strategy and business transformation	This recommendation is implemented. The Office of Information and Communications Technology has evaluated the need for and appointed a chief technology officer at the D-2 level, and defined the function and role in the revised ICT strategy (A/69/517). In the regular budget proposal currently before the legislative committees, the existing D-2 Director of the Office of Information and Communications Technology is proposed as the Chief Technology Officer	The Board notes the Administration's response and considers that this recommendation is fully implemented	X			
A/67/651, para. 55	The Administration plan for any parallel business and ICT activities associated with a new strategy to be supportive of the implementation of Umoja and not conflict with its objectives	This recommendation is implemented. The initiatives in the revised ICT strategy were developed to support Umoja and enterprise systems as a matter of priority	The Board notes the Administration's response and considers that this recommendation is fully implemented	X			
A/67/651, para. 56	In relation to ICT, the Administration define the leadership and	The Administration considers this recommendation to be implemented. The 2016-2017 budget reflects a major	The Board notes the Administration's response and will monitor its implementation in 2017			X	

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
	executive roles, competencies and management effort that should be directed to three distinct aspects of ICT delivery, namely: (a) transformative change, innovation and leadership across the Secretariat; (b) the design and enforcement of corporate guidance, frameworks, policies and standards; and (c) operational services	shift in the allocation of resources from operations (subprogramme 6: Global Operations Division) to key transformative and critical areas as defined in the ICT strategy (subprogramme 5: Global Services Division, including the Global Security and Architecture Section, which was previously managed and budgeted for under subprogramme 6, and the enterprise application centres in New York and Bangkok). The shift can be seen in document A/70/6 (Sect. 29E) as well as in the support account proposal for the 2017/18 financial year and the 2016 cost plan for the extrabudgetary resources The Administration suggests that the status of the recommendation be changed to "implemented"	and subsequent years				
A/67/651, para. 68	The Administration develop a fit-for-purpose governance framework to oversee the strategic development of ICT across the United Nations. This governance framework should clearly set out roles, accountabilities and responsibilities and ensure that decision-making bodies operate distinctly from consultative and advisory forums	The Secretary-General's bulletin has been finalized and will be issued in the course of 2017	The Board considers this recommendation to be under implementation. Governance structures have been revised and progress in implementing the recommendation has been made. However, the Board notes that the delegation of authority to the Chief Information Technology Officer is still pending		X		

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
A/67/651, para. 76	Over time, the Administration redirect existing resources of the Office of Information and Communications Technology to more strategic activities and consider the use of alternative sourcing arrangements for day-to-day ICT support services	The 2016-2017 budget reflects a major shift in resource allocation. The 2018-2019 budget formulation is intended to achieve full visibility of the ICT requirements identified by offices and departments. The Office of Information and Communications Technology continues to coordinate requirements across the Secretariat for the following contracts: global Cisco agreement for network appliances, global checkpoint agreement for firewalls, global Microsoft agreement for the roll-out of Unite Mail (migration of the Lotus Notes fragmented systems into one United Nations email system based on Exchange/Office 365 Hybrid), global VMWare enterprise licence agreement contract for virtualization, global VMWare AirWatch contract for mobile device management, global Lenovo contract for end-user devices taking into account the evolution of end-user computing, global SITA contract for the provision of dynamic multipoint virtual private network and multiprotocol label switching connectivity, global Amazon Web Services contract for XaaS (anything as a service) and global Microsoft Azure contract for XaaS (anything as a service)	The Board notes the Administration's response and will monitor the development of the global sourcing strategy		X		
A/67/651, para. 82	Management develop an "intelligent client" function for Secretariat-wide ICT and within United Nations departments to effectively articulate business needs and provide a channel for the Office of	The business relationship management function is focused on understanding core business needs from across the Secretariat to enable the alignment of business and technology. During 2017-2019, this function will be the "intelligent client" function and will bring a business perspective to ICT	Progress in implementing this recommendation has been made through the establishment of the Business Relationship Management Section as an "intelligent client" function, as well as the establishment of other business-facing functions, such as regional technology centres. While these functions provide a channel for the		X		

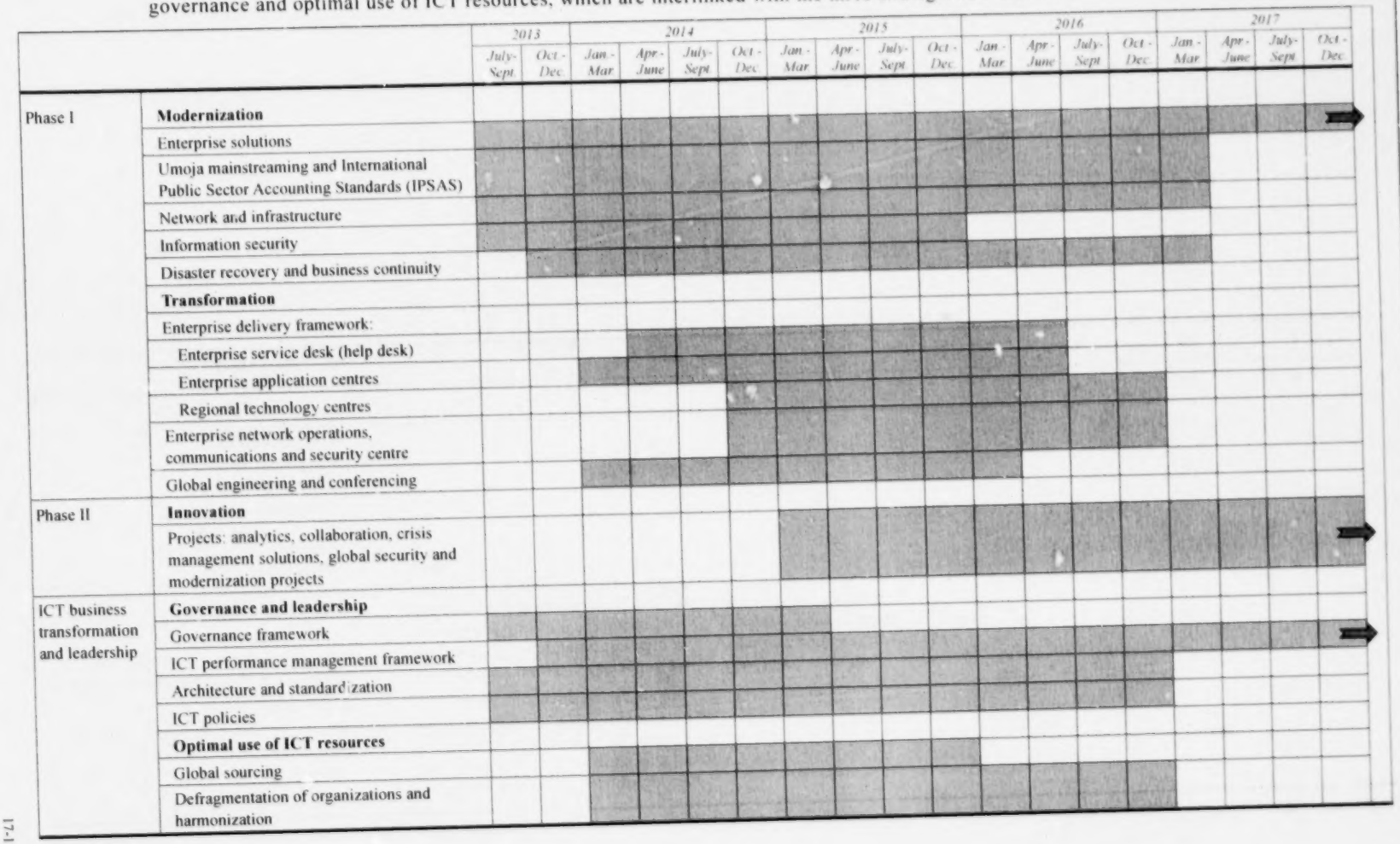
Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
	Information and Communications Technology, local ICT committees and business areas to improve services		Office of Information and Communications Technology, they need to be fully embedded to enable an effective articulation of business needs. The recommendation remains under implementation				
A/67/651, para. 92	The Administration develop an application management strategy to minimize security risks and reduce costs. Such a strategy should address enterprise-wide applications primarily and include the decommissioning of legacy systems applications and services and any necessary data migration. As part of the new strategy regarding applications, the Administration should also develop a process to ensure that strategic ICT and operational investments can be made, no matter where they are undertaken in the Secretariat, and that they are consistent with Umoja and other enterprise applications	The application management strategy for the Secretariat (reference: APP.01.STG) was promulgated by the Chief Information Technology Officer on 27 March 2015 and is aimed at establishing a framework in which the Organization application development efforts are defragmented and standardized in line with best practices	The Board notes the Administration's response and considers that, even though progress has been made, the recommendation remains under implementation		X		
A/67/651, para. 100	Management strengthen Secretariat-wide ICT standards to consolidate and leverage ICT buying power, and use these standards to drive the harmonization of ICT	The Office of Central Support Services coordinates with the Office of Information and Communications Technology (OICT) all shopping carts for acquisitions and ICT services raised by non-OICT offices. OICT has an opportunity to review and clear requests submitted by other offices to	The Board notes the Administration's response and considers the recommendation to be under implementation		X		

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
	as a necessary precursor to the consolidation of software applications and infrastructure	the Office of Central Support Services. The coordination of requirements for the 2018-2019 biennium will ensure better visibility of acquisitions by all departments in budgets and plans					
A/67/651, para. 101	The Administration agreed with the detailed recommendation on ICT security set out by the Board in its memorandum to the Chair of the Advisory Committee on Administrative and Budgetary Questions on this matter	The implementation of the action plan to strengthen information security in the areas of prevention, incident detection and response to security threats is ongoing (see A/70/364 and Corr.1)	The Board notes the Administration's response and considers the recommendation to be under implementation		X		
	Total			**2**	**21**	**0**	**0**
	Percentage			**9**	**91**	**0**	**0**

Annex II

Original strategic road map

Phases I and II cover the strategic information and communications technology (ICT) drivers of modernization, transformation and innovation. ICT business transformation and leadership cover the two major underlying areas of governance and optimal use of ICT resources, which are interlinked with the three strategic ICT drivers.



Annex III

Information and communications technology policies pending finalization and revision: 2017 road map

A. Three policies under review by the Information and Communications Technology Policy Committee

1. Policy on cloud computing (new technical procedure)
2. Minimum security requirements for public websites (revision of a technical procedure) (recently submitted)
3. Videoconferencing user etiquette (new information circular) (recently submitted)

B. Two policies submitted by the Information and Communications Technology Policy Committee but still with the Chief Information Technology Officer (policy development stage)

1. Mobile device use (technical procedure)
2. Mobile device use (administrative instruction)

C. Policies (administrative instructions) pending consultation of the Office of Information and Communications Technology or the Office of Human Resources Management

1. Remote access (administrative instruction), Office of the Under-Secretary-General
2. Telephony services (administrative instruction), Office of the Under-Secretary-General
3. E-mail services (administrative instruction), Office of the Under-Secretary-General

D. Policies due for revision

1. United Nations guidelines on the use of internal social media
2. Security incident response
3. Access control for the Secretariat
4. Intrusion detection
5. Remote access
6. Disaster recovery planning
7. Protection of United Nations assets from malicious software
8. Retention schedule for information and communications technology records
9. System monitoring and log management
10. Umoja data interfaces
11. Data centre access
12. Software installation
13. Cryptographic controls

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14. Software development
15. Videoconferencing
16. System configuration
17. Application decommissioning
18. Security consideration for videoconferencing

Annex IV

Status of application rationalization

Business owner	*Number of records in Unite Applications*	*Applications in use (production or sunset)*	*Retired or rationalized applications (as at 1 July 2014)*	*Applications maintained*	*Applications to be retired (obsolete applications)*	*Applications to be consolidated or modernized*
Department for General Assembly and Conference Management	97	67	30	29	2	36
Department of Economic and Social Affairs	31	15	16	12	0	3
Department of Field Support, Department of Peacekeeping Operations, Department of Political Affairs missions	694	350	344	71	2	277
Department of Management	12	8	4	3	0	5
Department of Political Affairs	73	64	9	1	2	61
Department of Public Information	37	31	6	17	3	11
Department of Safety and Security	73	71	2	21	3	47
Economic and Social Commission for Asia and the Pacific	64	31	33	5	2	24
Economic and Social Commission for Western Asia	46	28	18	6	0	22
Economic Commission for Africa	113	67	46	14	0	53
Economic Commission for Europe	21	17	4	12	0	5
Economic Commission for Latin America and the Caribbean	87	70	17	29	2	39
Executive Office of the Secretary-General of the United Nations	22	18	4	2	1	15
Inter-Agency Secretariat of the International Strategy for Disaster Reduction	5	5	0	5	0	0
International Criminal Tribunal for Rwanda	63	0	63	0	0	0
International Tribunal for the Former Yugoslavia	60	51	9	22	2	27
Office for Disarmament Affairs	37	30	7	4	1	25
Office for the Coordination of Humanitarian Affairs	31	18	13	8	0	10
Office of Central Support Services	74	59	15	30	0	29
Office of Human Resources Management	38	17	21	6	0	11
Office of Information and Communications Technology	64	47	17	24	7	16
Office of Internal Oversight Services	24	16	8	7	2	7
Office of Legal Affairs	11	9	2	1	0	8
Office of Programme, Planning, Budget and Accounts	55	28	27	9	0	19
Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States	1	1	0	0	0	1
Office of the United Nations High Commissioner for Human Rights	45	36	9	23	1	12

Business owner	*Number of records in Unite Applications*	*Applications in use (production or sunset)*	*Retired or rationalized applications (as at 1 July 2016)*	*Applications maintained*	*Applications to be retired (obsolete applications)*	*Applications to be consolidated or modernized*
United Nations Conference on Trade and Development	4	3	1	2	0	1
United Nations Environment Programme	11	8	3	6	0	2
United Nations Human Settlements Programme (UN-Habitat)	4	4	0	3	0	1
United Nations Office at Geneva	86	49	37	14	0	35
United Nations Office at Nairobi	107	58	49	7	1	50
United Nations Office at Vienna and United Nations Office on Drugs and Crime	326	197	129	67	5	125
Total	**2 416**	**1 473**	**943**	**460**	**36**	**977**

Annex V

Results of the survey on the implementation of the information and communications technology strategy

I. Objectives of the survey

The audit team sought to assess user perception of the quality and usefulness of the information and communications technology (ICT) services and products implemented to improve organizational efficiency, across the Secretariat. Hence, a user satisfaction survey was conducted with the help of the Office of Information and Communications Technology. The survey was originally scheduled from 30 January to 6 February 2017 but was later extended until 12 February 2017.

II. Brief of the survey

The survey comprised 10 questions, each being subdivided into further questions. The intent of the survey was to assess the level of awareness about the ICT strategy and the level of satisfaction against each ICT service. Users were asked to rate their satisfaction level on a scale of 0 to 5, i.e. from "least satisfied" (1) to "most satisfied" (5), with 0 meaning "not aware".

III. Respondent numbers

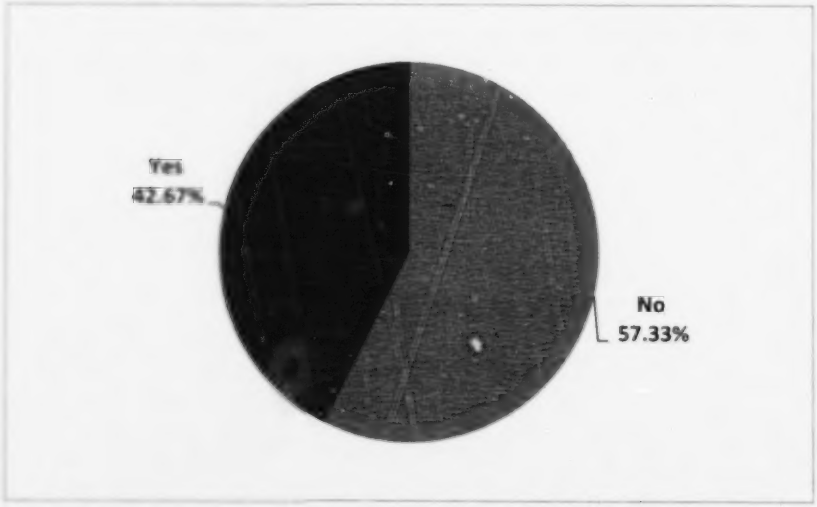
While 6,753 users took part in the survey, only the 2,979 complete responses received by 6 February 2017 have been considered for the purpose of the present analysis.

IV. Results of the survey

1. Are you aware of the revised ICT strategy of 2014 implemented at the United Nations?

Around 57 per cent of respondents were not aware of the ICT strategy.

Overall awareness of the ICT strategy of 2014

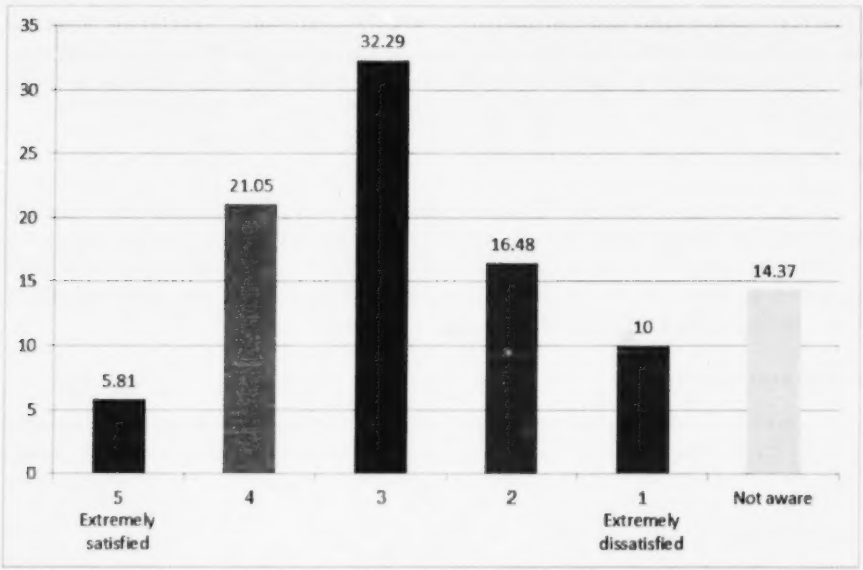


2. How would you rate the level of satisfaction with respect to the ICT applications, services and support provided?

A total of 26 per cent of respondents expressed dissatisfaction and 32 per cent were indifferent.

Overall satisfaction: ICT services, applications and support

(in percentage)

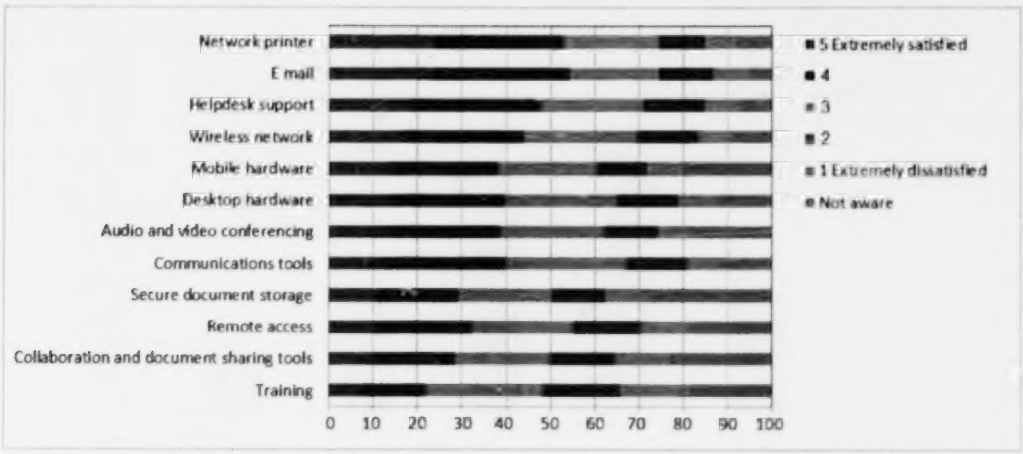


3. What is your satisfaction level about the quality of ICT services (email, communication tools, help desk support, wireless network, remote access, mobile hardware, desktop hardware, network printer, audioconferencing and videoconferencing, training, secure document storage, collaboration and document-sharing tools)?

More than 60 per cent of the respondents rated their satisfaction levels at 3 or below, with the exception of email and network printer. The lowest satisfaction levels are noticed against training, collaboration and document sharing-tool, and remote access.

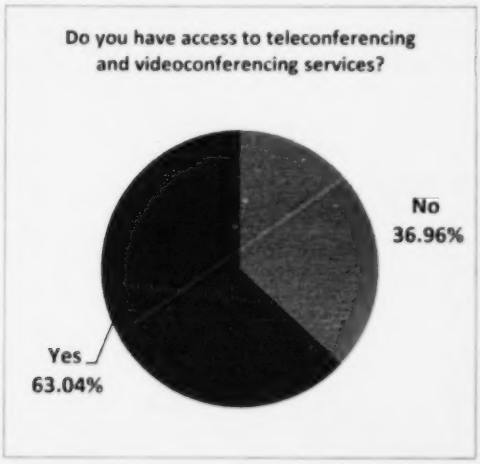
ICT services: overall satisfaction

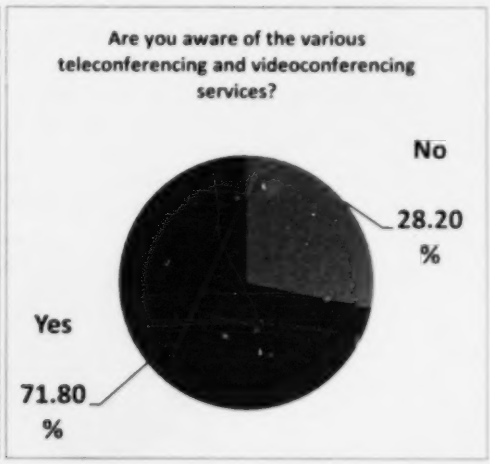
(in percentage)



4. Teleconferencing and videoconferencing services

Around 72 per cent of the respondents were aware of the various teleconferencing and videoconferencing services, and 63 per cent had access to them.



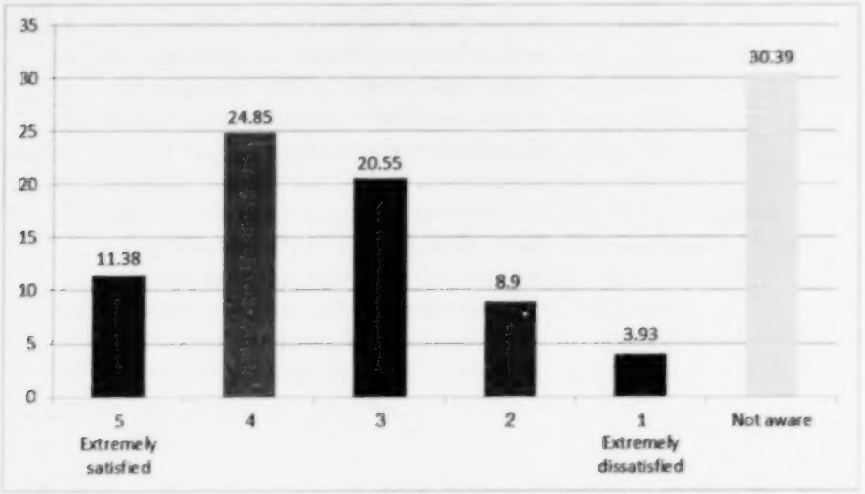


Subquestion c: if you are aware of teleconferencing and videoconferencing services and have access to them, how would you rate the quality of such services?

A total of 30 per cent of the respondents were not aware of the quality of teleconferencing and videoconferencing services. Around 33 per cent displayed satisfaction levels of 3 or below.

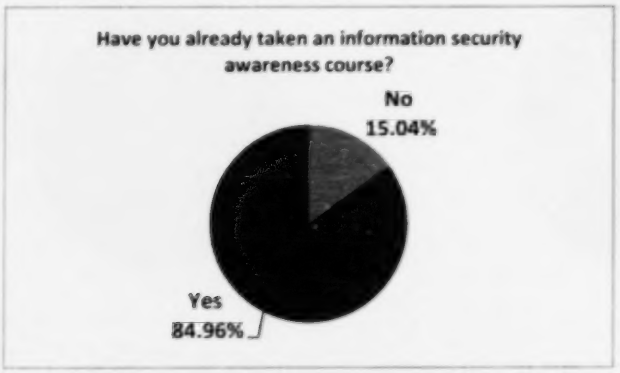
Quality of teleconferencing and videoconferencing services

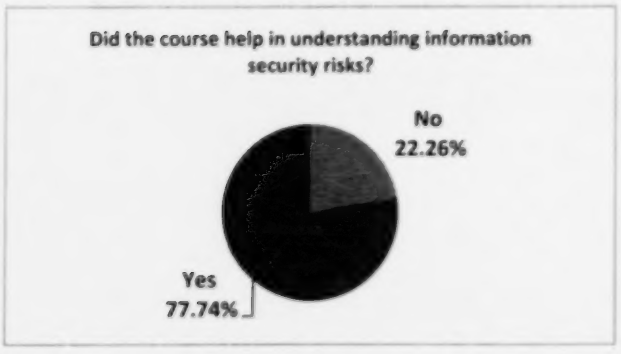
(in percentage)



5. Information security

Regarding the training on information security courses, it is observed that around 15 per cent of the respondents had not yet been trained. Furthermore, when asked whether they felt that the courses adequately enhanced their understanding of the risks and of how to protect themselves and the Organization, 22 per cent of the respondents answered in the negative.



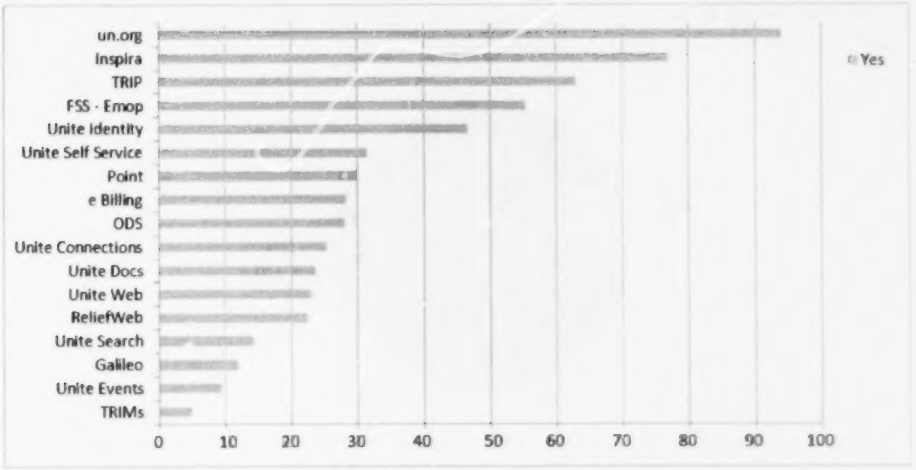


6. Do you use the following ICT enterprise applications frequently?

Around 70 per cent of the respondents were not frequently using applications such as Unite Connections, Unite Docs, Unite Web, Unite Search or Unite Events. Between 60 and 95 per cent of the respondents used such applications as Inspira or Unite Identity or the "un.org" website. Only 55 per cent of the respondents were frequently accessing Unite Self Service.

Use of enterprise applications: yes / no

(in percentage)

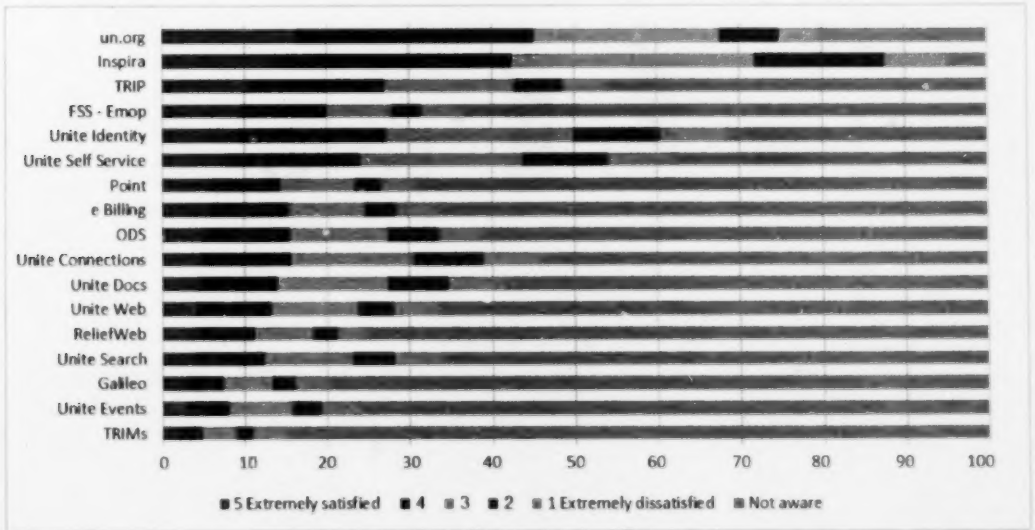


7. Rate your satisfaction levels with the ICT enterprise applications.

Around 70 per cent of the respondents were not aware of many of the applications, including Unite applications.

Enterprise applications: satisfaction levels

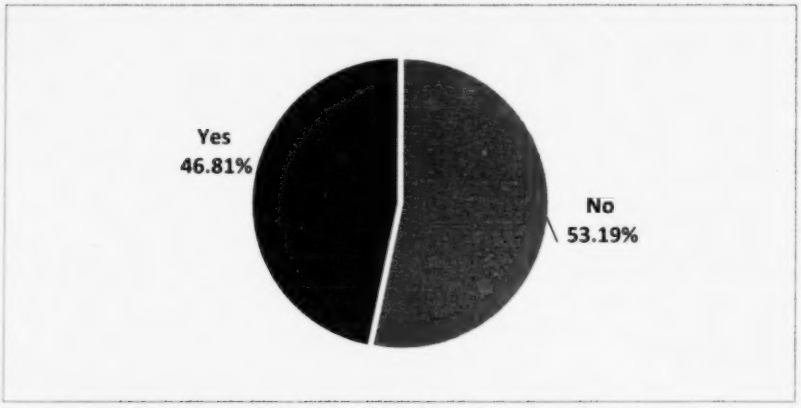
(in percentage)



ICT training

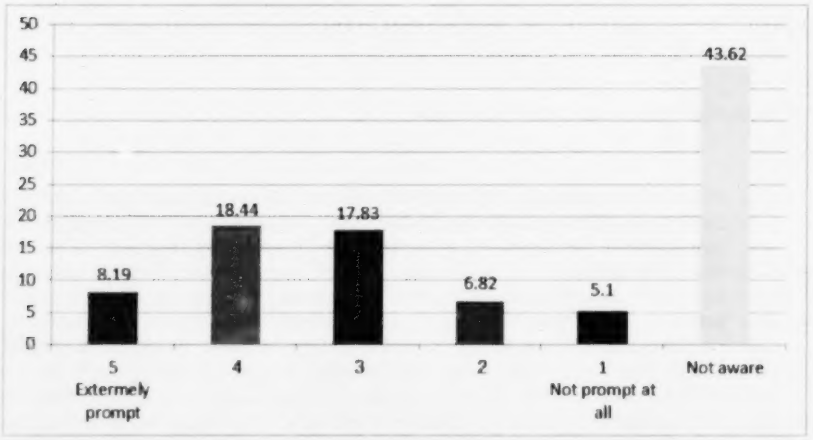
A total of 53 per cent of the respondents stated that they had not been given the necessary training in ICT for their current assignment. They also stated that the level of usefulness of the training imparted was only moderate. Around 44 per cent responded that they were not aware of the usefulness of ICT training. Around 26 per cent rated ICT training as useful and 18 per cent gave average ratings with respect to its usefulness. Around 12 per cent found the training not useful.

Have you been provided with the ICT training necessary for your current assignment?



Usefulness of ICT training

(in percentage)

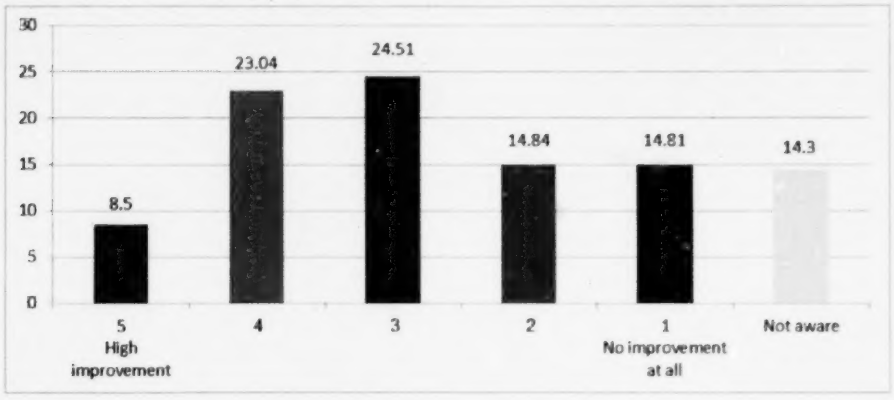


8. In the last two years, has ICT improved your work efficiency?

Around 15 per cent of the respondents said that ICT had not improved their work efficiency at all. Only 32 per cent of the respondents expressed improvement in work efficiency.

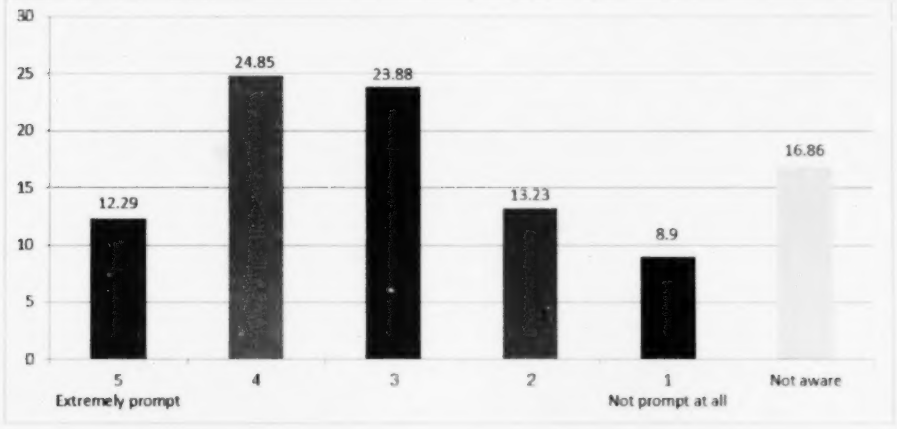
ICT impact on work efficiency

(in percentage)



9. Rate the promptness of Unite Service Desk.

Around 46 per cent of the respondents rated the promptness of the Unite Service Desk at levels 3 or below. Around 38 per cent rated it as prompt, and around 16 per cent mentioned that they were not aware of the promptness of the Service Desk.



United Nations A/72/152

General Assembly

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Seventy-second session
Item 20 (d), (e) and (f) of the provisional agenda*

Sustainable development: Protection of global climate for present and future generations of humankind

Implementation of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa

Convention on Biological Diversity

Implementation of United Nations environmental conventions

Note by the Secretary-General

The Secretary-General has the honour to transmit to the General Assembly the reports submitted by the secretariats of the United Nations Framework Convention on Climate Change, the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, and the Convention on Biological Diversity.

* A/72/150.

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Please recycle

I. Report of the Executive Secretary of the United Nations Framework Convention on Climate Change on the United Nations Climate Change Conference, Marrakech, Morocco, 2015

A. Introduction

1. The General Assembly, in its resolution 71/228, invited the secretariat of the United Nations Framework Convention on Climate Change to report to the Assembly at its seventy-second session, through the Secretary-General, on the work of the Conference of the Parties to the Convention. The present report has been prepared in response to that invitation.

B. Outcomes of the twenty-second session of the Conference of the Parties, the twelfth session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol and the first session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement

1. Summary

2. The United Nations Climate Change Conference was held in Marrakech, Morocco, from 15 to 18 November 2016 and comprised the following sessions:

(a) Twenty-second session of the Conference of the Parties;

(b) Twelfth session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol;

(c) Forty-fifth session of the Subsidiary Body for Implementation;

(d) Forty-fifth session of the Subsidiary Body for Scientific and Technological Advice;

(e) Second part of the first session of the Ad Hoc Working Group on the Paris Agreement.

3. The Marrakech Conference enjoyed a high level of participation and was attended by 15,885 government delegates from 194 parties to the Convention; representatives of 1 observer State; 5,475 observers from 51 bodies and organizations of the United Nations system, including programmes, convention secretariats, specialized agencies and institutions, and related organizations; and 1,204 media representatives.

4. It delivered significant results across all bodies: the Conference of the Parties adopted 25 decisions, the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol adopted 8 decisions and the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement adopted 2 decisions.

5. The decisions adopted and announcements made during the Conference related to a range of issues, including climate finance, adaptation, capacity-building, technology, gender-responsiveness, indigenous people, and the work programme under the Paris Agreement.

6. On climate finance, more than $81 million was pledged to the Adaptation Fund, surpassing the Fund's target for the year. Pledges totalling more than $23 million were made to the Climate Technology Centre and Network, which

provides support to developing countries for climate technology development and transfer. As the implementation arm of the Technology Mechanism, the Climate Technology Centre and Network is a key institution providing assistance to nations in realizing their commitments under the Paris Agreement.

7. A new five-year framework was agreed under the Warsaw International Mechanism for Loss and Damage Associated with Climate Change Impacts, which addresses the impacts of climate change that are not addressed through planned adaptation, including displacement, migration and human mobility and comprehensive risk management.

8. On capacity-building, parties adopted a decision on the terms of reference of the Paris Committee on Capacity-building. With regard to the Paris Agreement, the Committee will help to address gaps and needs, both current and emerging, in implementing capacity-building in developing country parties and further enhancing capacity-building efforts, including with regard to coherence and coordination in capacity-building activities under the Convention.

9. An important step was taken in the area of advancing gender balance and achieving a gender-responsive climate policy through an agreement to extend the gender work programme to include civil society, businesses and other entities.

10. Governments also initiated work towards operationalizing the local communities and indigenous people's platform established at the twenty-first meeting of the Conference of the Parties. The platform marks a new era in addressing the concerns and needs of indigenous peoples in the climate process and, once operational, it will allow for the exchange of experiences and sharing of best practices on mitigation, adaptation and other climate actions.

2. High-level segment

11. The joint high-level segment of the twenty-second session of the Conference of the Parties, twelfth session of the Conference of the Parties serving at the Meeting of the Parties to the Kyoto Protocol, and first session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement was opened by the President of the Conference of the Parties.

12. King Mohammed VI of Morocco, the Secretary-General, the President of the General Assembly and other dignitaries delivered statements, in which they welcomed the early entry into force on 4 November 2016 of the Paris Agreement and recognized the need to take decisive steps to achieve its full implementation.

13. The Secretary-General also highlighted the need for countries to continue the spirit of collaboration that had led to the adoption of the Paris Agreement, the 2030 Agenda for Sustainable Development and other important multilateral frameworks agreed in 2015. He similarly reiterated the need for leadership by Heads of State and Governments and other stakeholders, and for the engagement of society as a whole in addressing climate change. Furthermore, he underpinned the importance of advancing scientific understanding as a basis for increasing ambition with regard to attaining the goals of the Paris Agreement and called on developed countries to honour their commitment to mobilize climate finance to support the actions of developing countries in mitigating and adapting to climate change vulnerabilities.

14. During the high-level segment, 166 statements were delivered, of which 34 were by Heads of State, 15 by Heads of Government, 4 by Vice-Presidents, 1 by a Deputy Prime Minister, 6 by ministers for foreign affairs and 106 by ministers of the environment, other ministers and heads of delegation. Statements were also made by representatives of nine observer constituencies: indigenous peoples, trade unions, women and gender, youth, business and industry, the environment, research

and independent non-governmental organizations, and local government and municipal authorities.

15. The Government of Morocco presented the Marrakech Action Proclamation for our Climate and Sustainable Development, which was supported by all parties participating in the Conference. The Proclamation reflects the renewed political momentum towards a new era of implementation and action on climate change and sustainable development by Governments, businesses, investors, subregional governments and cities. It calls for the highest political commitment to build on that momentum so that action to address climate change fully supports the achievement of the Sustainable Development Goals for the benefit of all people and the planet.

16. Two high-level events were convened during the Marrakech Conference: a ministerial dialogue on climate finance, at which multi-stakeholder approaches to mobilization and delivery of adaptation finance were considered, and an event on accelerating action to address climate change. The latter event provided an opportunity to bolster high-level engagement on implementation; announce new or enhanced voluntary efforts, initiatives and coalitions and report on their progress; and further engage dignitaries of parties, international organizations, international cooperative initiatives and non-party stakeholders.

17. The high-level climate champions, Ambassador Laurence Tubiana of France and Minister Delegate Hakima El Haite of Morocco, launched the Marrakech Partnership for Global Climate Action, a framework designed to catalyse and support climate action by parties and non-party stakeholders in the period 2017-2020, giving effect to the existing arrangements as agreed by the Conference of the Parties at its twenty-first session in Paris.

3. Outcomes of the twenty-second session of the Conference of the Parties

18. The following decisions were adopted by the twenty-second session of the Conference of the Parties:

(a) 1/CP.22: Preparations for the entry into force of the Paris Agreement and the first session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement;

(b) 2/CP.22: Paris Committee on Capacity-building;

(c) 3/CP.22: Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts;

(d) 4/CP.22: Review of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts;

(e) 5/CP.22: Review and report of the Adaptation Committee;

(f) 6/CP.22: National adaptation plans;

(g) 7/CP.22: Long-term climate finance;

(h) 8/CP.22: Report of the Standing Committee on Finance;

(i) 9/CP.22: Terms of reference for the review of the functions of the Standing Committee on Finance;

(j) 10/CP.22: Report of the Green Climate Fund to the Conference of the Parties and guidance to the Green Climate Fund;

(k) 11/CP.22: Report of the Global Environment Facility to the Conference of the Parties and guidance to the Global Environment Facility;

(l) 12/CP.22: Sixth review of the Financial Mechanism;

(m) 13/CP.22: Initiation of a process to identify the information to be provided by parties in accordance with article 9, paragraph 5, of the Paris Agreement;

(n) 14/CP.22: Linkages between the Technology Mechanism and the Financial Mechanism of the Convention;

(o) 15/CP.22: Enhancing climate technology development and transfer through the Technology Mechanism;

(p) 16/CP.22: Third comprehensive review of the implementation of the framework for capacity-building in developing countries under the Convention;

(q) 17/CP.22: Improving the effectiveness of the Doha work programme on article 6 of the Convention;

(r) 18/CP.22: Outcome of the first round of the international assessment and review process (2014-2015);

(s) 19/CP.22: Implementation of the global observing system for climate;

(t) 20/CP.22: Work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention;

(u) 21/CP.22: Gender and climate change;

(v) 22/CP.22: Financial and budgetary matters;

(w) 23/CP.22: Administrative, financial and institutional matters;

(x) 24/CP.22: Dates and venues of future sessions;

(y) 25/CP.22: Rules of procedure of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement.

4. Outcomes of the twelfth session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol

19. The following decisions were adopted by the twelfth session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol:

(a) 1/CMP.12: Third Review of the Adaptation Fund;

(b) 2/CMP.12: Report of the Adaptation Fund Board;

(c) 3/CMP.12: Guidance relating to the clean development mechanism;

(d) 4/CMP.12: Guidance on the implementation of article 6 of the Kyoto Protocol;

(e) 5/CMP.12: Review of the joint implementation guidelines;

(f) 6/CMP.12: Third comprehensive review of the implementation of the framework for capacity-building in developing countries under the Kyoto Protocol;

(g) 7/CMP.12: Financial and budgetary matters;

(h) 8/CMP.12: Administrative, financial and institutional matters.

5. Outcomes of the first session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement

20. The following decisions were adopted by the first session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement:

(a) 1/CMA.1: Matters relating to the implementation of the Paris Agreement;

(b) 2/CMA.1: Rules of procedure of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement.

6. Conclusions and recommendations

21. The General Assembly may wish, inter alia:

(a) To take note of the report of the Executive Secretary of the United Nations Framework Convention on Climate Change, as transmitted by the Secretary-General;

(b) To note the outcomes of the twenty-second session of the Conference of the Parties, twelfth session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol, and first session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement, hosted by the Government of Morocco from 15 to 18 November 2016;

(c) To urge parties to the Paris Agreement that have not yet done so to deposit their instruments of ratification, acceptance, approval or accession, where appropriate, as soon as possible in order to ensure its universality;

(d) To urge parties to deposit their instruments of acceptance in order to ensure the prompt entry into force of the Doha Amendment to the Kyoto Protocol;

(e) To urge parties to conclude the work programme under the Paris Agreement as soon as possible and to forward the outcomes in advance of the third part of the first session of the Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement, to be convened in conjunction with the twenty-fourth session of the Conference of the Parties in Poland in 2018, for its consideration and adoption; and to invite the Executive Secretary to continue to report to it on the work of the Conference of the Parties, Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol and Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement.

II. Report of the Secretary-General on the implementation of General Assembly resolution 71/229 on the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa

A. Introduction

22. In its resolution 71/229, the General Assembly requested the Secretary-General to report to the Assembly at its seventy-second session on the implementation of the resolution. The present report constitutes an update for the Assembly on the principal activities that have been undertaken in that respect.

B. Preparations for the thirteenth session of the Conference of the Parties and its subsidiary bodies

23. Following the acceptance of the generous offer of the Government of China to host the thirteenth Conference of the Parties, the Conference will be held in Ordos, China, from 6 to 16 September 2017.

24. The Conference will be divided into three segments: an initial segment, a high-level segment and a segment comprising meetings of the subsidiary bodies of the

Conference of the Parties, namely, the Committee for the Review of the Implementation of the Convention and the Committee on Science and Technology.

25. In accordance with decision 34/COP.12, interactive dialogue sessions among ministers and other high-ranking officials will be organized on 11 and 12 September 2017 on the occasion of the high-level segment. Three parallel ministerial/high-level round-table discussions will be held on the following themes: "Land degradation: a challenge to development, prosperity and peace"; "Drought and sand and dust storms: early warning and beyond"; and "Land degradation neutrality: from targets to action — what will it take?". Three interactive plenary segments will be held thereafter on the following issues: gender and land rights (a dialogue with civil society); how local governments can help to address the challenges of land degradation (a dialogue with elected and local government representatives); and how private sector investment can help to achieve land degradation neutrality (a dialogue with the private sector).

26. The sixteenth session of the Committee for the Review of the Implementation of the Convention will address matters such as the effective implementation of the Convention at the national, subregional and regional levels and the reporting and review process of the Convention with regard to the integration of the Sustainable Development Goals and targets into the implementation of the Convention.

27. The programme of work of the thirteenth session of the Committee on Science and Technology will include items resulting from the work programme of the science-policy interface mechanism for the biennium 2016-2017; a review of the interface mechanism, including the proposed work programme for the next biennium in that regard, and a review of its achievements; and promotion of the analysis, dissemination and accessibility of best practices and the United Nations Convention to Combat Desertification Knowledge Hub.

28. Consultations on the regional implementation annexes of affected country parties in Africa, Asia, Latin America and the Caribbean, Northern Mediterranean and Central and Eastern Europe will be held in advance of the thirteenth session of the Conference of the Parties, in Ordos on 4 and 5 September 2017.

C. Follow-up to the 2030 Agenda for Sustainable Development

1. Partnerships on land degradation neutrality (Sustainable Development Goal target 15.3)

29. In order to follow up on the adoption of the 2030 Agenda for Sustainable Development, the Convention secretariat continued to work with the Statistics Division of the Secretariat and the Inter-Agency and Expert Group on Sustainable Development Goal Indicators to upgrade the status of indicator 15.3.1 (Proportion of land that is degraded over total land area), which had been adopted by the Statistical Commission at its forty-eighth session.

30. The secretariat continued to work closely with key partners, such as the Food and Agriculture Organization of the United Nations, as part of an inter-agency advisory group on indicator 15.3.1, to revise the metadata document and develop guidance on good practices with regard to country implementation and to ensure national ownership. In addition, storylines on land degradation were being provided for the annual global report on progress regarding implementation of the Sustainable Development Goals. Under the auspices of the Land Degradation Neutrality Target Setting Programme, the secretariat has continued to help countries to build national capacity for implementing and monitoring target 15.3 of Sustainable Development Goal 15, including national target-setting.

2. Land Degradation Neutrality Target Setting Programme

31. Following the adoption of the 2030 Agenda, the twelfth session of the Conference of Parties endorsed Sustainable Development Goal target 15.3 as a "strong vehicle" for driving the implementation of the Convention and invited all parties to formulate voluntary targets to achieve land degradation neutrality.

32. In order to support parties in translating the decisions taken by the Conference of the Parties into action at the country level, the science-policy interface mechanism developed the land degradation neutrality conceptual framework, providing a sound scientific basis for understanding land degradation neutrality and developing practical guidelines for implementing and monitoring national processes to achieve it.

33. Furthermore, the secretariat of the Convention and its Global Mechanism, with the support of 17 international partners, established the Land Degradation Neutrality Target Setting Programme. The Programme is aimed at assisting countries in formulating national voluntary targets to achieve land degradation neutrality by providing practical tools and guidance for the establishment of national targets, and accelerating the implementation of transformative programmes and projects with positive changes. The Programme supports countries in:

(a) Leveraging land degradation neutrality by catalysing its multiple benefits and bringing it to the forefront of national agendas on, inter alia, climate change, restoration, green growth and poverty eradication;

(b) Assessing land degradation neutrality by establishing a baseline and identifying drivers of and trends in degradation;

(c) Setting land degradation neutrality targets and associated measures by defining the country's ambitions in terms of combating land degradation;

(d) Achieving land degradation neutrality by identifying transformative programmes and projects that can contribute to multiple Sustainable Development Goals and embedding land degradation neutrality into national development priorities.

34. At the global level, the Programme facilitates technical support, knowledge-sharing and cooperation through peer learning among countries, global analysis, advocacy, and partnerships.

35. In its decision 3/COP.12, the Conference of the Parties at its twelfth session invited parties to use the monitoring and evaluation approach that had been adopted in decision 22/COP.11 in order to monitor, evaluate and communicate progress towards achieving the land degradation neutrality target. In response, the Programme supports parties in setting baselines and targets by providing geospatial data on three biophysical indicators: land cover, land productivity and carbon stocks above and below ground (with soil organic carbon as the metric). The indicators are also subindicators of Sustainable Development Goal indicator 15.3.1.

36. By 13 June 2017, 110 countries had made a commitment to setting national land degradation neutrality targets, providing an important opportunity to foster coherence within national policies, actions and commitments; move from pilot project towards implementation; and create blended finance packages to finance the transition towards land degradation neutrality.

3. Land Degradation Neutrality Fund: an innovative approach

37. The development of the Land Degradation Neutrality Fund has advanced substantially since the twelfth session of the Conference of the Parties. Following

the competitive selection of a private sector structuring partner, a memorandum of understanding was established in December 2015 between the Convention's Global Mechanism and Mirova, the responsible investment subsidiary of Natixis Asset Management. Both parties made commitments to co-develop the Fund and provide financial resources for this undertaking. Additional financial support for the development of the Fund was provided by the Governments of France, Luxembourg and Norway and by the Rockefeller Foundation. Throughout the development of the Fund, partnerships and collaborations were established with public financial institutions, private sector institutional investors, NGOs, financial intermediaries, other investment funds and project promoters.

4. High-level political forum on sustainable development: review of Sustainable Development Goal 15

38. In 2018, the high-level political forum on sustainable development, whose overall theme will be "Transformation towards sustainable and resilient societies", will review a set of Sustainable Development Goals, including Goal 15. The secretariat of the United Nations Convention to Combat Desertification plans to conduct a number of regional consultations in order to contribute more effectively to the forum and its review of Goal 15. Other activities will also be organized by the secretariat throughout 2018 to help to raise awareness among the relevant stakeholders participating in the forum. Target 15.3, on land degradation neutrality, will be reviewed, and Member States will be updated on progress made in its implementation, including the Land Degradation Neutrality Target Setting Programme and the creation of the innovative funding under the Land Degradation Neutrality Fund, both of which are major developments.

5. Policies on drought

39. There is an urgent need to establish early warning systems for timely drought detection and preparedness. Such early warning systems have the potential to help to trigger action early within a drought plan. They can be used to assess vulnerability and prepare targeted mitigation actions. Monitoring and early warning also provide the foundation on which timely decisions can be made by policymakers and stakeholders at all levels.

40. The Convention supports countries by advocating three important pillars on drought preparedness:

(a) Early warning systems: declaring a drought too late can have a devastating impact on lives and livelihood. The point at which a drought is declared, however, can often be very subjective and highly political. Early warning systems guide affected countries through the provision of timely information that can be used to reduce risks and to better prepare for an effective response;

(b) Vulnerability and risk assessment: no amount of early warning will work without action to protect the most vulnerable. Some people and systems are more vulnerable than others to drought as a result of social, economic, and environmental factors. It is important to combine better forecasts with detailed knowledge on how landscapes and societies respond to a lack of rain, and to turn that knowledge into early intervention; and

(c) Drought risk mitigation measures: proactive drought risk management can save the lives and the livelihoods of millions of people. For example, the development of sustainable irrigation schemes for crops and livestock or water harvesting schemes can boost the recycling and reuse of water, explore the cultivation of more drought-tolerant crops, expand crop insurance schemes and establish alternative livelihoods that can provide income in drought-prone areas.

D. Global celebration of World Day to Combat Desertification and outreach activities

41. In 2017, the global observance of World Day to Combat Desertification was held in Ouagadougou on 15 June. Over 400 international and local participants attended the ceremonies, including three Heads of State, several ministers, eminent personalities, and representatives of intergovernmental organizations and civil society organizations. Ministers and government officials at a high-level symposium issued a call for action on land-based jobs to tackle Africa's three greatest interlinked challenges, namely, security, stability and sustainability, through the Security, Stability and Sustainability Initiative. The call for action was endorsed by the Presidents of Burkina Faso, Mali and the Niger in a joint statement made during the closing ceremony.

E. Collaboration with the Global Environment Facility

42. Collaboration with the secretariat of the Global Environment Facility continued to strengthen during the period under review, with the Convention secretariat attending the consultations on the seventh replenishment of the Global Environment Facility. At the 52nd Council meeting, held in May 2017, the Independent Evaluation Office of the Facility presented a land degradation focal area study, covering the Facility's grant-funding activities in agricultural lands, rangelands, degraded productive lands and desert lands, and with regard to combating deforestation and desertification. The purpose of the study was to inform the Global Environment Facility's seventh replenishment process by evaluating its land degradation focal area on the basis of evidence gathered. The study included an analysis of the value for money of the focal area's projects in order to understand the efficiency of the Facility's investments in the area of land degradation. It was highlighted in the study that, by investing more resources in land, the Facility could help to achieve multiple goals and deliver benefits in a more strategic and effective manner, and see a higher return on its investment.

F. Science-policy interface mechanism

43. When it met in April 2017, the Bureau of the Committee on Science and Technology revised and endorsed the preliminary agenda of the Committee's thirteenth session. The Bureau also discussed how best to organize the session so as to facilitate dialogue between the parties, the science-policy interface mechanism and other invited panellists on the policy implications of scientific outputs and to formulate policy-relevant recommendations.

44. Also in April 2017, the science-policy interface mechanism, established by the Conference of the Parties in its decision 23/COP.11, discussed the current status of and process for finalizing its work programme for the period 2016-2017. The work programme contained three major objectives and four coordination areas. The objectives were to provide scientific guidance for the operationalization of the voluntary land degradation neutrality target; highlight the science-based synergistic potential of sustainable land management practices to address desertification/land degradation and drought, climate change mitigation and adaptation; and to encourage the development and implementation of specific rehabilitation, restoration and reclamation measures and practices in degraded lands. As requested by the Conference of the Parties at its twelfth session, the science-policy interface mechanism will present, at the thirteenth session of the Committee on Science and Technology, a synthesis report, including policy-oriented recommendations, for

each objective in its work programme, and a report on the coordination activities conducted during the biennium 2016-2017 with the Intergovernmental Panel on Climate Change, the Intergovernmental Technical Panel on Soils of the Global Soil Partnership and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

G. Observations and recommendations

45. All life on earth depends on access to healthy and productive land, but some 12 million hectares are lost each year to degradation processes. Achieving the overarching goals for sustainable development is unrealistic if such land degradation is not halted and reversed. The successful implementation of target 15.3 on land degradation neutrality can connect the dots between many goals and targets and thus deliver many co-benefits, from biodiversity conservation and combating climate change to ensuring economic growth and human well-being. Achieving land degradation neutrality will serve as an accelerator for the implementation of other Sustainable Development Goals, as already acknowledged by the General Assembly in its resolution 71/229. In this regard, it is significant that 110 Member States have already subscribed to the Land Degradation Neutrality Target Setting Programme.

46. The General Assembly may wish to continue calling for further investment aimed at making the Programme operational and acknowledging the importance of the Land Degradation Neutrality Fund as an innovative funding scheme for financing the 2030 Agenda for Sustainable Development, in particular target 15.3 of the Sustainable Development Goals. The Assembly may also wish to call on the Global Environment Facility to increase the financial resources allocated to its Land Degradation Focal Area during the ongoing seventh replenishment process, which is due to conclude by June 2018.

47. Droughts and dust and sand storms are increasing in both frequency and intensity. The General Assembly may wish to call on Member States to prepare drought preparedness policies, with a focus on early warning systems, vulnerability and risk assessments, and drought risk mitigation measures.

III. Report of the Executive Secretary of the Convention on Biological Diversity

A. Introduction

48. In its resolution 71/230, the General Assembly invited the secretariat of the Convention on Biological Diversity to report to the Assembly at its seventy-second session on the implementation of the resolution, including the outcome of the thirteenth meeting of the Conference of the Parties to the Convention on Biological Diversity and progress in the implementation of the Convention and the Aichi Biodiversity Targets and difficulties encountered in the process of their implementation. The present report is submitted in response to that invitation.

49. At the time of writing, the status of ratifications to the Convention on Biological Diversity and its Protocols was as follows: 196 States and 1 regional economic integration organization had deposited instruments of ratification to the Convention on Biological Diversity; 171 parties to the Convention had deposited their instruments of ratification to the Cartagena Protocol on Biosafety; 39 parties to the Cartagena Protocol had deposited their instruments of ratification to the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the

Cartagena Protocol;[1] and 100 parties to the Convention had deposited their instruments of ratification to the Nagoya Protocol.

50. The thirteenth meeting of the Conference of the Parties to the Convention was held in Cancun, Mexico, from 4 to 17 December 2016. The eighth meeting of the Conference of the Parties serving as the Meeting of the Parties to the Cartagena Protocol on Biosafety and the second meeting of the Conference of the Parties serving as the Meeting of the Parties to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization were held concurrently.

B. Outcomes of the thirteenth meeting of the Conference of the Parties to the Convention on Biological Diversity

51. The thirteenth meeting of the Conference of the Parties to the Convention on Biological Diversity[2] adopted 33 decisions, including on:

(a) Assessing progress in the implementation of the Convention and the Strategic Plan for Biodiversity 2011-2020 and towards achievement of the Aichi Biodiversity Targets, including with regard to updating and implementing national biodiversity strategies and action plans (see section F below);

(b) Mainstreaming biodiversity within and across sectors, including agriculture, forestry, fisheries and tourism;

(c) Providing guidance on ecosystem-based adaptation to climate change and interlinkages between biodiversity and human health; invasive alien species (including the use of biological control agents and addressing the risks associated with trade); climate-related geoengineering; sustainable wildlife management; pollinators, pollination and food production; and digital sequencing of information on genetic resources and synthetic biology;

(d) Adopting a short-term ecosystem restoration plan;

(e) Welcoming the decision of the Economic and Social Council on the international arrangement on forests and inviting members of the Collaborative Partnership on Forests to consider ways to further advance the Aichi Biodiversity Targets;

(f) Addressing the impacts of marine debris and underwater noise on marine and coastal biodiversity and biodiversity in cold waters and describing additional ecologically or biologically significant marine areas;

(g) Adopting voluntary guidelines on ensuring the consent of indigenous peoples and local communities with regard to accessing traditional knowledge and on advancing work on a glossary of terms and best practices for the repatriation of traditional knowledge;

(h) Reviewing progress in resource mobilization and urging parties to increase their efforts to achieve the targets;

(i) Adopting strategic guidance for the next four-year replenishment period of its financial mechanism, the Global Environment Facility, and taking note of an assessment of financial needs undertaken to inform the seventh replenishment process;

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[1] The supplementary protocol has not yet entered into force; 40 parties to the Cartagena Protocol must submit an instrument of ratification or accession before it can enter into force.

[2] Further information is available from www.cbd.int/conferences/2016.

(j) Agreeing on an action plan for the period 2017-2020 to support and enhance capacity-building for the implementation of the Convention and its Protocols, on the basis of the needs of parties, with a focus on strengthening the implementation of the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets;

(k) Recognizing the need for a comprehensive and participatory process to develop proposals for the follow-up to the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets, namely, a post-2020 biodiversity framework, and requesting the Executive Secretary to prepare a proposal to that end;

(l) Agreeing to hold the fourteenth meeting of the Conference of Parties in Egypt, the fifteenth in China and the sixteenth in Turkey.

C. Outcomes of the eighth meeting of the Conference of the Parties serving as the Meeting of the Parties to the Cartagena Protocol on Biosafety

52. The eighth meeting of the Conference of the Parties serving as the Meeting of the Parties to the Cartagena Protocol on Biosafety adopted 19 decisions, including on:

(a) Assessing and reviewing the effectiveness of the Protocol and, accordingly, setting priorities for operational objectives on biosafety legislation, risk assessment, risk management, the detection and identification of living modified organisms, and public awareness, education and training;

(b) Reviewing the status of implementation of the Framework and Action Plan for Capacity-building for the Effective Implementation of the Cartagena Protocol on Biosafety (2012-2020), and maintaining the Framework as adopted;

(c) Adopting operational definitions of unintentional transboundary movements and illegal transboundary movements of living modified organisms;

(d) Taking note of the document entitled "Guidance on risk assessment of living modified organisms", extending the online forum on risk assessment and risk management and requesting the Subsidiary Body on Scientific, Technical and Technological Advice to recommend a way forward with regard to addressing the needs, priorities and gaps identified by parties;

(e) Requesting parties to make available to the Biosafety Clearing-House information on the transit and contained use of living modified organisms;

(f) Extending the programme of work on public awareness, education and participation in the safe transfer and handling of living modified organisms until 2020 and prioritizing activities under that programme of work;

(g) Extending the mandate of the expert group on socioeconomic considerations.

D. Outcomes of the second meeting of the Conference of the Parties serving as the Meeting of the Parties to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization.

53. The second meeting of the Conference of the Parties serving as the Meeting of the Parties to the Nagoya Protocol on Access to Genetic Resources and the Fair and

Equitable Sharing of Benefits Arising from their Utilization adopted 14 decisions that addressed three key areas:

(a) Supporting the ratification and implementation of the Nagoya Protocol, including decisions on capacity-building and on the Access and Benefit-sharing Clearing-House;

(b) Progress in implementation and compliance with the Nagoya Protocol, including decisions on assessment, review and compliance;

(c) Further policy development, including decisions on the need for and modalities of a global multilateral benefit-sharing mechanism, and digital sequence information on genetic resources.

54. The respective meetings of the Conference of the Parties serving as the Meetings of the Parties to both the Nagoya and Cartagena Protocols decided to use the term "indigenous peoples and local communities" in their decisions and official documents, noting that such a change in wording did not affect the obligations of the parties or the legal interpretation of the Protocols.

E. High-level segment and other events associated with the thirteenth meeting of the Conference of the Parties

55. The high-level segment of the Conference was convened on 2 and 3 December 2016 and was attended by over 167 ministers and high-level representatives. The high-level segment adopted the Cancun Declaration on Mainstreaming the Conservation and Sustainable Use of Biodiversity for Well-being, which focuses on integrating biodiversity into key economic sectors, including agriculture, forestry, fisheries and tourism, in order to achieve global biodiversity targets. Ministers expressed their commitment to taking urgent action to achieve the Aichi Biodiversity Targets.

56. During the high-level segment, several parties announced commitments in a variety of areas, including to protect coral reefs and their ecosystems; support capacity-building activities in developing countries; increase control over invasive alien species; develop species management plans for high-value plant species; cultivate indigenous biological resources; and encourage community participation in product development. At a ministerial-level meeting, the 20 like-minded mega-diverse countries[3] adopted a charter to achieve Aichi Target 11 by 2020, which was subsequently welcomed by the Conference of the Parties.

57. A number of other informal events were convened on the margins of the Conference aimed at engaging a range of stakeholders in the implementation of the Convention. The events included:

(a) 2016 forum on business and biodiversity: over 250 experts from businesses, Governments and NGOs participated in the forum, which focused on the mainstreaming of biodiversity within the agriculture, forestry, fisheries and tourism sectors from the perspective of business. Other issues addressed included natural capital accounting and financing; examining links between climate change and biodiversity; and supply chain policies. One of the outcomes of the forum was a business and biodiversity pledge, signed by over 103 major businesses;

[3] Bolivia (Plurinational State of), Brazil, China, Colombia, Costa Rica, Democratic Republic of the Congo, Ecuador, Guatemala, India, Indonesia, Iran (Islamic Republic of), Kenya, Madagascar, Malaysia, Mexico, Peru, Philippines, South Africa and Venezuela (Bolivarian Republic of). Ethiopia was welcomed as a new member of the group.

(b) Forum of international legislators: practical strategies and commitments were discussed with regard to achieving the Aichi Biodiversity Targets, and the legislators pledged to hold Governments accountable for implementation of the commitments;

(c) Third forum on science for biodiversity: the forum was convened on the theme "Mainstreaming biodiversity for well-being: contributions from science". Its objective was to facilitate the sharing of knowledge and solutions among scientists, decision makers and civil society in order to integrate cross-sectoral biodiversity, in particular on the agriculture, fisheries, forestry and tourism sectors;

(d) Múuch'tambal summit on indigenous experience — traditional knowledge, biological and cultural diversity: the summit focused on the contributions of traditional knowledge, innovations and practices in the areas of agriculture, fisheries, forestry and tourism with regard to the conservation and sustainable use of biodiversity. The declaration adopted at the summit included recommendations on measures that could be undertaken at the local, national and international levels to strengthen the links between biological and cultural diversity for a sustainable future;

(e) Civil society and youth alliances for mainstreaming biodiversity for well-being: the theme of the civil society forum, attended by 148 organizations was "Biodiversity integration for welfare in the agricultural, forestry, fisheries, tourism and urban sectors". At the youth forum, a number of recommendations and commitments were made to strengthen progress towards achievement of the Aichi Biodiversity Targets;

(f) Fifth global biodiversity summit of cities and subnational governments: representatives of 73 countries participated at the summit, which adopted the Quintana Roo communiqué on mainstreaming local and subnational action on biodiversity. A number of commitments were made by representatives of various local and city entities.

F. Progress made and difficulties encountered in the implementation of the Strategic Plan for Biodiversity 2011-2020 and in the achievement of the Aichi Biodiversity Targets

58. The Conference of the Parties undertook a further review of progress made in implementing the Strategic Plan for Biodiversity 2011-2020, on the basis of information contained in the fifth national reports received by parties on the status, trends and challenges related to biodiversity and of information on national biodiversity strategies and action plans. To date, 186 parties (95 per cent) have provided a fifth national report and 144 parties (73 per cent) have submitted national biodiversity strategies and action plans since 2010.

59. The Conference of the Parties noted that, while there had been significant progress towards the achievement of some elements of some of the Aichi Biodiversity Targets, the progress to date on most of the Targets was insufficient to ensure their achievement by 2020. The Conference therefore urged parties to intensify efforts aimed at achieving their national targets, thereby contributing to the achievement of the Aichi Biodiversity Targets. Parties were also encouraged, in accordance with national circumstances, priorities and capacities, to consider increasing the ambition and/or scope of the national or regional targets to a level that was commensurate with the Targets.

60. Limited capacities and resources to implement the Strategic Plan for Biodiversity 2011-2020 represented a major challenge, in particular for developing

countries. An increased focus on scientific and technical cooperation and continued attention to resource mobilization were identified as being necessary in order to support countries in addressing those challenges. Support from the international community and the United Nations system, by prioritizing biodiversity in the implementation of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals, would be crucial for generating and sustaining the momentum required to fully implement the Strategic Plan and achieve the Aichi Biodiversity Targets. A number of decisions adopted by the Conference of the Parties at its thirteenth meeting, including in the areas of capacity-building, resource mobilization and the Global Environment Facility as the Convention's financial mechanism, provided for further action in that regard. There remained a need to elevate the profile of biodiversity and the Convention at the highest political levels.

G. Follow-up to the United Nations Conference on Sustainable Development, the United Nations Decade on Biodiversity and 2030 Agenda for Sustainable Development

61. The Convention has promoted a number of activities aimed at following up the outcomes of the United Nations Conference on Sustainable Development, which welcomed the United Nations Decade on Biodiversity as an important framework to promote the engagement of all stakeholders in the conservation and sustainable use of biodiversity.

62. Significant among those activities were the number of commemorative events that had been organized at the national level to mark the International Day for Biological Diversity, on 22 May 2017, on the theme "Biodiversity and sustainable tourism". The theme was chosen to coincide with the observance of 2017 as the International Year of Sustainable Tourism for Development. The various celebrations provided an opportunity to raise awareness about the important contribution made by sustainable tourism to economic growth and the conservation and sustainable use of biodiversity.

63. The Conference of the Parties at its thirteenth meeting, welcomed the adoption of a framework for a communications strategy, prepared in the intersessional period, that would provide a flexible framework for guiding the actions and activities of the secretariat, parties and other organizations and stakeholders during the remaining years of the United Nations Decade on Biodiversity.

64. In collaboration with other relevant organizations, the secretariat prepared a report on biodiversity and the 2030 Agenda for Sustainable Development,[4] which was launched at the thirteenth meeting of the Conference of the Parties. The ways in which the Strategic Plan for Biodiversity 2011-2020 and the 20 Aichi Biodiversity Targets contributed to the achievement of the 2030 Agenda and the Sustainable Development Goals were highlighted in the report.

65. The secretariat of and parties to the Convention on Biological Diversity participated actively in the United Nations Conference to Support the Implementation of Sustainable Development Goal 14,[5] convened from 5 to 9 June 2017. The Executive Secretary participated in the conference plenaries and partnership dialogues, highlighting the critical role of biodiversity in achieving Sustainable Development Goal 14, among other Goals. The secretariat announced that voluntary commitments had been made with regard to a capacity-building platform for the Aichi Biodiversity Targets and the Sustainable Development Goals

[4] Available from //www.cbd.int/development/.

[5] See https://oceanconference.un.org/.

and to global dialogues with regional seas organizations and regional fisheries bodies on accelerating progress towards the Aichi Biodiversity Targets and the Sustainable Development Goals.

H. Recommendations

66. The General Assembly, at its seventy-second session, may wish, inter alia:

(a) To take note of the outcomes of the thirteenth meeting of the Conference of the Parties to the Convention on Biological Diversity, the eighth meeting of the Conference of the Parties serving as the Meeting of the Parties to the Cartagena Protocol on Biosafety and the second Conference of the Parties serving as the Meeting of the Parties to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, stressing the importance of their follow-up and implementation;

(b) To call upon States to promote the mainstreaming of biodiversity in economic sectors and take note of the Cancun Declaration on Mainstreaming the Conservation and Sustainable Use of Biodiversity for Well-being;

(c) To call upon all parties to accelerate and scale up efforts to implement the Strategic Plan for Biodiversity 2011-2020 and to achieve the Aichi Biodiversity Targets, acknowledging the contribution of such efforts to the implementation of the 2030 Agenda for Sustainable Development and achievement of the Sustainable Development Goals;

(d) To invite all States and relevant United Nations departments of the Secretariat, specialized agencies, funds, programmes of the United Nations system and the regional commissions to enhance their contribution to the achievement of the objectives of the Strategic Plan for Biodiversity 2011-2020;

(e) To reaffirm that the Conference of the Parties recognized the need for a comprehensive and participatory process to develop proposals for the follow up to the Strategic Plan for Biodiversity 2011-2020 and encourage States and all stakeholders to contribute to the development of the post-2020 global framework for biodiversity;

(f) To highlight the importance of raising high-level political engagement for the achievement of and follow-up to the Aichi Biodiversity Targets and related goals and the targets of the 2030 Agenda for Sustainable Development;

(g) To call upon all States that have not yet done so to ratify or accede to the Convention on Biological Diversity;

(h) To call upon all Parties to the Convention that have not yet done so to ratify or accede to the Nagoya Protocol;

(i) To call upon all Parties to the Convention that have not yet done so to ratify or accede to the Cartagena Protocol on Biosafety and its Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress.

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Seventy-second session
Item 73 (b) of the provisional agenda*
Promotion and protection of human rights: human rights questions, including alternative approaches for improving the effective enjoyment of human rights and fundamental freedoms

Effects of foreign debt and other related financial obligations of States on the full enjoyment of all human rights, particularly economic, social and cultural rights

Note by the Secretary-General

The Secretary-General has the honour to transmit to the General Assembly the report of the Independent Expert on the effects of foreign debt and other related international financial obligations of States on the full enjoyment of all human rights, particularly economic, social and cultural rights, Juan Pablo Bohoslavsky, submitted pursuant to Human Rights Council resolutions 25/16 and 34/3.

* A/72/150.

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Report of the Independent Expert on the effects of foreign debt and other related international financial obligations of States on the full enjoyment of all human rights, particularly economic, social and cultural rights

Summary

In the present report, the Independent Expert on the effects of foreign debt and other related international financial obligations of States on the full enjoyment of all human rights, particularly economic, social and cultural rights, studies the human rights implications of debt disputes being submitted to the international investment arbitration system and whether, from a human rights perspective, investment arbitration is an adequate option for solving disputes in the context of debt restructuring.

In the absence of an international framework to regulate sovereign debt restructuring, investment arbitration has recently been seen as a potential forum for holdout creditors and vulture funds to seek to enforce sovereign debt instruments. However, the system of investment arbitration was created to provide legal security for foreign direct investment and to contribute to economic development, not to enforce financial obligations, and even less to provide an avenue for the claims of speculative hedge funds and non-cooperative creditors. To date, however, most investment tribunals have found jurisdiction over sovereign debt disputes. The willingness of investment arbitrators to hear such disputes may encourage vulture funds and holdout creditors to use this form of dispute resolution, making debt restructuring longer and more costly and difficult.

Most bilateral investment treaties do not contain any explicit human rights provisions and investment arbitration tribunals have been rather reticent about encompassing human rights robustly in their decisions. Notwithstanding a few arbitration decisions, the consideration of human rights issues in international investment arbitration has so far remained rather on the periphery of the international investment law regime. Given the deep and broad human rights implications of debt crises, it would be a dangerous development if bilateral investment treaties became a forum for solving sovereign debt disputes.

While the international community is making great efforts to prevent or minimize holdout litigation, investment arbitration may open a new door for such creditors to deploy disruptive strategies. The current system of investment arbitration may therefore impair economic recovery and undermine State funding for public services and State institutions that give effect to economic, social, cultural rights and the protection of civil and political rights.

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I. Introduction

1. Bilateral investment treaties, providing legal security for foreign direct investment (FDI), may result in tensions with State obligations to protect human rights. While FDI may under certain conditions provide economic and social benefits, investment treaties often constrain the ability of States to provide adequate national regulation in relation to labour standards, the rights to health, food, water and sanitation, and expose States to compensation claims by private and public investors. They can thus have a chilling effect on States in ensuring adequate regulation of economic activity within their territories. Bilateral and multilateral investment treaties have also raised concerns in relation to the right to public participation, as many of them were negotiated in secrecy. Investment arbitration has also been criticized on procedural grounds for its lack of transparency, lack of representation of affected persons in arbitration proceedings and lack of judicial review.

2. In the present report the Independent Expert studies a particular aspect of investment arbitration: the use of investment arbitration to enforce debt payments in the context of debt restructuring and its impact on human rights.[1] He analyses the human rights implications of debt disputes being submitted to the international investment arbitration system and addresses the question of whether bilateral investment treaties have the potential to solve or exacerbate the problems associated with sovereign debt crises for debtor States. The central question he tries to answer is whether, from a human rights perspective, investment arbitration is an adequate option for solving disputes in the context of debt restructuring.[2]

3. In the event of a default, States need to determine how to manage their debt repayments while ensuring that human rights are respected within their territory. Given finite resources, States can either fully prioritize their debt repayments and withdraw financing from public services, or try to continue to provide public services whilst not fully servicing their debts. Both approaches have the potential to have a negative impact on the ability of the State to respect, protect and fulfil its human rights obligations. Obviously, both options are not usually implemented in absolute terms: States do not just unilaterally and entirely repudiate their debts based on economic distress and those that are willing to ask their population to make a great sacrifice in order to repay the debt would usually try to make efforts to protect their population from harm associated with fiscal consolidation measures.

4. What we see in practice is that State insolvency or illiquidity usually triggers negotiations between debtors and creditors, who eventually have to agree on the scope and extent of the debt reduction or reprofiling and economic reform conditions. While restoring public debt sustainability is of paramount importance, treating creditors arbitrarily or disregarding the human rights of the population cannot be considered as legitimate options.[3] On the other hand, the range of abusive, discriminatory or bad faith behaviour that both debtors and creditors can display before, during and after defaults is very rich. In such dynamic situations, balancing all applicable legal standards is a very complex and delicate task.

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[1] The Independent Expert thanks Edward Guntrip from the University of Sussex for his research work for the present report.

[2] This study on bilateral investment treaties complements reports by other human rights experts on this subject. See A/HRC/19/59/Add.5, A/69/299, A/70/301, A/HRC/33/42, A/HRC/30/44 and A/HRC/33/40.

[3] See Juan Pablo Bohoslavsky and Matthias Goldmann, "An incremental approach to sovereign debt restructuring: sovereign debt sustainability as a principle of public international law", *Yale Journal of International Law*, vol. 41, No. 2 (2016), and A/70/275.

5. While the General Assembly has recently advanced the so-called Basic Principles for Sovereign Debt Restructuring Processes (see resolution 69/319), the fact that most developed countries did not support the resolution shows the continuous failure of the international community to set up a robust, comprehensive and sustainable legal and institutional framework to deal adequately with debt restructuring. That gap makes coordination among creditors and between creditors and debtors, tortuous and with unforeseeable outcomes. The global financial crisis of 2008 and the ongoing sovereign debt crisis in several countries have put even more pressure on the global financial architecture and displayed its weaknesses.[4]

6. The typical problem in this context is described as follows: if not all creditors agree to the debt terms that the debtor State is seeking to implement, some can hold out with the aim of trying to secure a more beneficial outcome in the future. Holdout creditors can significantly slow the sovereign debt restructuring process. While debt is outstanding, it is difficult for States to get access to the markets and loss of confidence in the ability of the State to repay its debt and overcome the financial crisis will also probably lead to outflows of capital. Longer delays can therefore result in more severe economic and financial crises and in the end trigger the need for larger haircuts. Consequently, holdouts can significantly affect sovereign debt restructuring that would otherwise function in the broader interest. The risks of prolonged debt restructuring processes with unforeseeable outcomes have created a market for hedge funds, which seek to exploit the situation by purchasing outstanding debt at a considerable discount from distressed bondholders before trying to enforce the terms of the instrument to maximize their return (the so-called vulture funds).[5]

7. Given the legal and institutional void in this field, and in particular the intense activity of vulture funds in sovereign debt markets, creditors have in recent years explored alternative forums to protect their contractual rights. One of the options has been to submit debt disputes to international arbitration under the umbrella of bilateral investment treaties.[6] To put it in simple words: in the context of debt crises, creditors invoke foreign investment law to protect their right to be repaid, for which they submit claims to international arbitration. What at first sight might be seen as a practical solution can be indeed a very problematic alternative from the point of view of human rights and debt sustainability.

8. The simultaneous submission of a State to the international human rights and international investment regimes can generate a dilemma for governments, which becomes tangible when subjected to claims on both those two fronts: either the State is liable for not taking the measures that are required by human rights treaties, or it may give priority to human rights obligations and thus affect the interests of investors. To some extent, this dilemma is exacerbated by the usual practice of arbitral tribunals that are responsible for interpreting and applying the bilateral investment treaties: such tribunals consider investment treaties as paramount and

[4] Christian J. Tams, Stephan W. Schill and Rainer Hofmann, "International investment law and the global financial architecture: identifying linkages, mapping interactions", in *International Investment Law and the Global Financial Architecture*, Christian J. Tams, Stephan W. Schill and Rainer Hofmann, eds. (Cheltenham, Gloucestershire, Edward Elgar Publishing, 2017).

[5] See Human Rights Council resolution 27/30, A/HRC/14/21 and A/HRC/33/54.

[6] Since 2005, creditors have brought four claims before investment arbitration tribunals to try and enforce the terms of sovereign bonds (*Abaclat and others v. Argentine Republic*, ICSID case No. ARB/07/5, decision on jurisdiction and admissibility, 4 August 2011; *Ambiente Ufficio and others v. Argentine Republic*, ICSID case No. ARB/08/9, decision on jurisdiction and admissibility, 8 February 2013; *Alemanni and others v. Argentine Republic*, ICSID case No. ARB/07/8, decision on jurisdiction and admissibility, 17 November 2014; and *Poštová banka, a.s. and Istrokapital S.E. v. Hellenic Republic*, ICSID case No. ARB/13/8, award, 9 April 2015).

have only recently recognized in some of their decisions the potential role of human rights law.[7] This dissociation has led to certain national regulatory measures to protect human rights being classified as violations of bilateral investment treaties. Investment arbitration tribunals have imposed stiff awards to States, which, in turn, reduce further the already eroded fiscal space of States going through financial troubles.[8]

9. The present report is divided into a further six sections. In section II, the Independent Expert describes when, how and why foreign investment protection law was created, making the case that its primary purpose was to provide legal security for all stakeholders in cases of direct investment, but was not a legal regime created to handle issues of private and public debt. In section III, he critically examines the narrow interpretation of applicable law that most investment tribunals apply by not attaching serious importance to human rights law in the disputes they solve. In section IV, he addresses how bilateral investment treaties and investment standards are being or could be used to resolve sovereign debt disputes, arguing that they are not adequate to address the wider implications of sovereign debt restructurings. In section V, he further problematizes that arbitration avenue by focusing on the adverse human rights implications of using bilateral investment treaties to deal with debt restructurings. Section VI contains key findings and recommendations.

II. Origins and purposes of bilateral investment treaties: nothing to do with debts

10. Foreign direct investment is characterized by the transfer of assets by an individual or a company (foreign investor), who is a national of one State (home State) into the territory of another State (host State), with a view to long-term economic benefit.[9] Prior to the existence of bilateral investment treaties, foreign investors, as aliens in the host State, were protected by the customary international minimum standard, which was enforced through diplomatic protection. That system did not generate significant protection for foreign investors. Not only was there a high threshold for establishing a violation of the customary standard, but also whether the host State chose to espouse the foreign investor's claim using diplomatic protection was a matter of discretion and subject to political influence.

11. The process of decolonization triggered the introduction of treaties that were dedicated to the protection of foreign investors. Many newly decolonized States were dissatisfied with the manner in which they had been economically exploited

[7] See the statement of the tribunal in *CMS Gas Transmission Company v. Argentine Republic*, ICSID case No. ARB/01/8, award, 12 May 2005. Argentina sought to rely on the constitutional standing of human rights treaties in its Constitution to justify their application in the dispute. In paragraph 121, the tribunal stated that "there is no question of affecting fundamental human rights when considering the issues contemplated by the parties." See also *Bernhard von Pezold v. Republic of Zimbabwe*, ICSID case No. ARB/10/15, award, 28 July 2015, procedural order No. 2, 26 June 2012, in which the tribunal rejected an amicus curiae submission, arguing that indigenous rights were irrelevant to the claim, before relying on the prohibition of racial discrimination in favour of the foreign investor.

[8] See *Saur International S.A. v. Argentine Republic*, ICSID Case No. ARB/04/4, decision on jurisdiction and liability, 6 June 2012; *Suez, Sociedad General de Aguas de Barcelona S.A. and Vivendi Universal S.A v. Argentine Republic*, ICSID case No. ARB/03/19, decision on liability, 30 July 2010. See also Juan Pablo Bohoslavsky and Juan Justo, "The conventionality control of investment arbitrations: enhancing coherence through dialogue", *Transnational Dispute Management*, vol. 10, No. 1 (2013). On the more general issue of the increasing loss of policy space in the past 15 years due to free trade agreements and bilateral investment treaties, see Rick Rowden, "The case for policy space", *The Mint*, Issue 2 (June 2017).

[9] See *OECD Benchmark Definition of Foreign Direct Investment*, 4th ed. (Paris, OECD, 2008).

during the colonial period and objected to the continuation of pre-existing concession agreements with what were now foreign investors.[10] To assert their economic independence (in addition to their political independence) newly decolonized States commenced expropriating foreign-owned investments. In the wake of expropriations and the legal uncertainty generated by debates in the United Nations regarding the legal rights of foreign investors, bilateral investment treaties were introduced to provide legal certainty. It needs to be recalled that the International Centre for Settlement of Investment Disputes was established in 1965 by the World Bank as an instrument to promote foreign investments. Later, with the implementation of the Washington Consensus and the global promotion of foreign investment, bilateral investment treaties became a widespread instrument for protecting foreign investors. Over the past 25 years, bilateral investment treaties have become entrenched as the main instrument in international law to protect FDI. Currently the international investment regime consists of nearly 3,000 bilateral investment treaties and over 350 multilateral treaties with investment provisions.[11]

12. In that context, it is not surprising that the so-called Salini test[12] was for a long time broadly used by arbitrators to identify whether a transaction could be considered as FDI for the purposes of article 25 of the Convention on the Settlement of Investment Disputes between States and Nationals of Other States (ICSID Convention). The test requires a contribution of money or assets to be a long-term investment; involve business risk; be in the territory of the host State; the foreign investor must be involved in the management of the investment; and it has to contribute to the economic development of the host State. In general terms, the Salini test has been seriously used by arbitrators to determine whether the transaction in question displays the characteristics of FDI. That is in line with the development terms of the ICSID Convention, upon which it was originally based. However, without substantial reforms of bilateral investment treaties, arbitrators are now much more open to considering pure financial obligations as protected by bilateral investment treaties.

13. In theory, bilateral investment treaties create legal certainty for foreign investors by conferring protection on investors and investment projects through both substantive protections and procedural rights. Bilateral investment treaties are structured so that the host State owes obligations to the home State, which are directly enforceable against the host State by the foreign investor. The substantive rights conferred indirectly upon the foreign investor relate to the protection of property (requiring compensated expropriation), legal rights (fair and equitable treatment), security (full protection and security) and non-discrimination (national treatment and most-favoured nation). Foreign investors commence legal proceedings by initiating a claim based on the standing offer by the host State of investment arbitration (sourced usually in a bilateral investment treaty or domestic legislation).

14. While primarily aimed at investor protection, bilateral investment treaties are also tools for the manifestation of political and economic ideologies. During the 1980s and 1990s, the terms of bilateral investment treaties reflected the Washington Consensus and its neoliberal policies. A market-driven approach to the allocation of FDI was manifested in bilateral investment treaties containing high levels of

[10] See Edward Guntrip, "Self-determination and foreign direct investment: re-imagining sovereignty in international investment law", *International and Comparative Law Quarterly*, vol. 65, No. 4 (October 2016).

[11] See United Nations Conference on Trade and Development (UNCTAD), international investment agreements navigator, available from http://investmentpolicyhub.unctad.org/IIA.

[12] See *Salini Costruttori S.p.A. and Italstrade S.p.A. v. Kingdom of Morocco*, ICSID case No. ARB/00/4, decision on jurisdiction, 23 July 2001.

investment protection as an inducement to foreign investors. In the 1990s, the introduction of the North American Free Trade Agreement saw investment disputes arise between developed States. In response, developed States narrowed the interpretation of investment protection standards to minimize their exposure to claims. Since 2000, the provisions of bilateral investment treaties have been gradually adjusted to take into account both legal and political developments.[13]

15. Two assumptions underpin the structure of bilateral investment treaties. The first is that the foreign investor needs protection from the host State during the post-establishment phase of the investment. Once the foreign investor has invested in the host State, he is subject to the exercise of sovereign power by the host State, which could be used in an arbitrary or discriminatory manner. Given the scale and duration of FDI projects, potentially adverse host State conduct generates risk. Investment protection standards are intended to minimize that risk by enabling a foreign investor to challenge the exercise of State power that violates investment protection standards. The second assumption is linked to the first. To induce foreign investors to enter their jurisdiction, States need to offer protection, as evidence that they are not going to act in an arbitrary or discriminatory manner. In theory, the higher the level of protection a State offers, the lower the risk for the foreign investor and the more desirable the State becomes as a location for foreign investment. However, this assumption is questionable based on empirical studies of FDI flows.[14]

16. Bilateral investment treaties provide for specialist dispute resolution in the form of investment arbitration, which was created as a supposedly apolitical forum to counter the perception of bias in the courts of host States. Modelled on international commercial arbitration and traditional forms of inter-State arbitration, its procedures can be governed by specialist investment arbitration rules or the procedural rules that govern international commercial arbitration. Similarly to international commercial arbitration and inter-State arbitration, investment arbitrators are appointed by the parties on an ad hoc basis. Furthermore, in line with practices from both forms of arbitration, investment arbitration has traditionally been confidential. The private aspects of investment arbitration have evolved to reflect the fact that investment arbitration is a matter of public interest. Measures to increase public involvement in investment arbitration include increased transparency and the introduction of amicus curiae submissions that can enable the public interest to be represented.

17. Nevertheless, it should be noted that affected third-party actors, such as resident populations affected by foreign investments, often have no adequate standing in investment arbitration and only limited opportunities for participation. Arbitration proceedings are in most cases conducted in camera, preventing affected third parties from following them. While amicus curiae submissions have become an avenue for considering public interests in investment arbitration, they have not been able to overcome the legitimacy crisis that the system of international investment law is facing.

[13] See Edward Guntrip, "Systemic integration and international investment law" in *Select Proceedings of the European Society of International Law, Volume 3 2010*, James Crawford and Sarah Nouwen, eds. (Oxford, Hart Publishing, 2012).

[14] See, for example, Mary Hallward-Driemeier, "Do bilateral investment treaties attract FDI? Only a bit and they could bite" in *The Effect of Treaties on Foreign Direct Investment: Bilateral Investment Treaties, Double Taxation Treaties, and Investment Flows*, Karl P. Sauvant and Lisa E. Sachs, eds. (Oxford, Oxford University Press, 2009); Lauge Skovgaard Poulsen, "The importance of BITs for foreign direct investment and political risk insurance: revisiting the evidence" in *Yearbook on International Investment Law and Policy 2009/2010*, Karl P. Sauvant, ed. (Oxford, Oxford University Press, 2010).

18. In sum, given the long-term nature of the investment involved and the high costs incurred by the foreign investor, it was considered necessary for investors to be granted the investment protection standards set out in bilateral investment treaties. That system, even with all its serious imperfections, was created to deal with problems related to direct investment, not financial transactions. Furthermore, the preamble of the ICSID Convention was never intended to protect, for example, speculative hedge funds, as it establishes that the purpose of ICSID is the fostering of economic development by way of encouraging private investment.[15]

19. Furthermore, even considering that a large number of bilateral investment treaties cover not only FDI but also portfolio investments, it is striking that the expansive interpretation of bilateral investment treaties, consisting of claiming that debt disputes should, in the context of debt restructuring, be submitted to investment arbitration, bypasses the entire global financial architecture and pertinent legal standards. Is it legitimate that multilateral financial institutions, public and private creditor representatives and taxpayers are not even heard in a process that will determine a debt restructuring, or that an investment tribunal dealing with this kind of case does not even consider principles such as debt sustainability?

III. Investment law and human rights: an unacceptably narrow view

20. Despite the increasing scope of bilateral investment treaties and investment arbitration covering sensitive economic and social areas affecting human rights, the rulings by arbitrators have so far accorded not much weight to human rights treaties.[16] Arbitration tribunals have occasionally made reference to human rights obligations, but rarely apply them directly. That can be attributed to a narrow understanding of what should be considered applicable law.

21. One reason is that so far bilateral investment treaties have included hardly any express references to human rights. Some bilateral investment treaties include references for investors to respect the core labour rights enumerated in the ILO Declaration on Fundamental Principles and Rights at Work.[17] However, none of the model bilateral investment treaties used by China, France, Germany, the United Kingdom of Great Britain and Northern Ireland or the United States of America mention human rights. Although the Guiding Principles on Business and Human Rights (A/HRC/17/31) emphasize that "States should maintain adequate domestic policy space to meet their human rights obligations when pursuing business-related policy objectives with other States or business enterprises, for instance through investment treaties or contracts", the vast majority of bilateral investment treaties currently in force do not include any explicit human rights safeguards.

22. The lack of express provisions addressing human rights in investment treaties should not prevent arbitrators from applying international human rights law. Firstly, States can potentially defend measures aimed at protecting the rights of their population by relying on provisions contained in many investment treaties protecting their regulatory powers, such as general clauses included in some investment treaties that provide a host State with the right to adopt measures to

[15] See Alex Grabowski, "The definition of investment under the ICSID Convention: a defense of Salini", *Chicago Journal of International Law*, vol. 15, No. 1 (2014).

[16] See Susan Karamanian, "The place of human rights in investor-state arbitration", *Lewis & Clark Law Review*, vol. 17, No. 2 (2013); and Pierre-Marie Dupuy and others, eds. *Human Rights in International Investment Arbitration* (Oxford, Oxford University Press, 2009).

[17] See, for example, article 13 of the 2012 model bilateral investment treaty of the United States.

protect security, human life, labour rights, public health or the environment.[18] Secondly, international investment law is part of public international law and, as such, should take into account other obligations in public international law, including human rights. Indeed, according to article 31 (3) (c) of the Vienna Convention on the Law of Treaties, article 42 of the ICSID convention and the general clauses incorporated in many bilateral investment treaties, arbitrators should not only consider the text of investment treaties, but also "any relevant rule of international law applicable in the relation between the parties". It has therefore been argued that article 31 (3) (c) of the Vienna Convention provides an important entry point for a systematic integration of human rights into investment arbitration.[19]

23. Core human rights treaties, such as the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights enjoy very widespread ratification. In most cases, they count as applicable international law for both States parties to bilateral investment treaties and would thus allow arbitration tribunals to consider human rights issues in the context of investment disputes. If States are not party to a human rights treaty, recourse can be made to the concept that core human rights norms are considered as entailing *erga omnes* (towards everyone) obligations, binding on all States, as there is a universal and undeniable interest in the protection of those rights. Their applicability is therefore comprehensive. Investors cannot reasonably expect to be protected by instrumental bilateral treaties from *erga omnes* obligations grounded in multilateral substantive human rights treaties.

24. As multilateral human rights treaties demand a widespread acknowledgement of the obligations established by them, it could not be lightly presumed that a State concluding a bilateral investment treaty would place itself in breach of obligations owed to the international community as a whole. As the normative conflict discussed here is at the heart of the relations between investors and host debtor States, a systemic integration of international law has to be sought. The underlying deliberative approach of those norms requires an openness towards interpreting "different rationalities of various segments of financial regulation", as monetary, fiscal, banking and development policies are intrinsically interlinked.[20]

25. When solving a dispute between a State and an investor that involves human rights, the arbitral panels must account for the interaction of the two legal regimes involved in their analysis, without displacing either of them. The basic guideline for reasonably managing that interaction is to find interpretations of the bilateral investment treaty that are compatible with human rights obligations and vice versa. There is a need for coherence, in order to avoid the fragmentation of an international legal order that aspires to legality and, consequently, to consistency. While a few recent investment tribunals have started to refer to human rights as part of their decisions, that is not yet a widespread or consolidated practice.[21]

26 Many early investment tribunals were reluctant to extend their jurisdiction to encompass human rights. That can be attributed to the limited jurisdiction of investment tribunals, in particular those conducted in accordance with the ICSID Convention that limits jurisdiction to "any legal dispute arising directly out of an

[18] See, for example, the 2004 Canada model bilateral investment treaty, arts. 10 and 11.

[19] See Bruno Simma, "Foreign investment arbitration: a place for human rights?", *International and Comparative Law Quarterly*, vol. 60, No. 3 (July 2011).

[20] See Matthias Goldmann "International investment law and financial regulation: towards a deliberative approach", in *International Investment Law and the Global Financial Architecture*.

[21] See *Hesham T. M. Al Warraq v. Republic of Indonesia*, United Nations Commission on International Trade Law, final award, 15 December 2014; *Philip Morris Brands Sàrl and Abal Hermanos S.A v. Oriental Republic of Uruguay*, ICSID case No. ARB/10/7, 8 July 2016.

investment" (art. 25). However, investment tribunals have dismissed the significance of human rights or have downplayed the potential for treaty conflicts between obligations sourced in bilateral investment treaties and human rights instruments.[22] Other tribunals have used human rights inconsistently to support the claims of foreign investors.[23] The most recent decision to address human rights in investment arbitration was in the case of *Urbaser v. Argentina*.[24] The investment tribunal integrated human rights into its decision by considering how human rights obligations affected the operation of the fair and equitable treatment standard, applied to the defence of necessity, and found jurisdiction over a human rights-based counterclaim. As such, the award is the most comprehensive with regard to the way in which it addresses the intersection of human rights and international investment law. The decision proves that some investment arbitrators may be willing to adopt an approach to investment arbitration that is open to human rights. However, it is controversial, given the manner in which the tribunal sought to confer human rights obligations directly on the foreign investor.[25] It is therefore unclear at this stage whether that award will be used in the future as a precedent for opening investment arbitration to a thorough consideration of applicable human rights norms.

27. Thus, while human rights are beginning to be recognized as relevant components of bilateral investment treaties, they are a long way from being entrenched. Consequently, the use of human rights in international investment law remains on the periphery of the legal regime.

28. Recent model bilateral investment treaties are beginning to introduce more flexible investment protection standards recognizing human rights. The 2016 India model bilateral investment treaty includes provisions that seek to protect human rights and confer obligations on home States,[26] but it has yet to be seen how it will be received by other States. The Comprehensive Economic and Trade Agreement between Canada and the European Union, which is awaiting ratification by European Union member States, also includes references to human rights in its preamble. The level of human rights protection it offers has nevertheless been the subject of critiques by human rights bodies.[27]

29. Despite such developments, existing bilateral investment treaties will bind States for a significant period of time and may still apply even when States withdraw from them, owing to the inclusion of sunset clauses.[28] For the vast majority of future investment disputes, there will therefore be no explicit textual foundation in bilateral investment treaties that will force an investment tribunal to discuss relevant human rights obligations.

[22] See, for example, *CMS Gas Transmission Company v. Argentine Republic*.

[23] See, for example, *Bernhard von Pezold v. Zimbabwe*.

[24] *Urbaser S.A. and Consorcio de Aguas Bilbao Bizkaia v. Republic of Argentina*, ICSID case No. ARB/07/26, award, 6 December 2016.

[25] See Edward Guntrip, "*Urbaser v Argentina*: the origins of a host state human rights counterclaim in ICSID arbitration?", *EJIL: Talk!*,10 February 2017.

[26] See articles 12 (1) (v) and 13.

[27] See, for example, Commission national consultative des droits de l'homme (France), "Let us not sacrifice human rights for commercial interests", 15 December 2016.

[28] That is the case for States such as Poland. See Agnieszka Zarowna, "Termination of BITs and sunset clauses — what can investors in Poland expect?", available from http://kluwerarbitrationblog.com/2017/02/28/booked-22-february-polish-bits/.

IV. Debt disputes in investment arbitration

30. Holdout creditors have started to use investment arbitration to seek to enforce the terms of their sovereign debt instruments. While there had already been other awards establishing that pure financial transactions qualified as investments,[29] the leading jurisprudence stems from the sovereign debt crises in Argentina.[30] These decisions seem to encapsulate the idea that the arbitrary use by States of their sovereign power to change the terms of their financial obligations towards creditors may constitute a treaty violation.[31] There is a need, however, to understand fully by whom, how and why these contractual terms have been modified. It is then disappointing to see that in those decisions with multiple ramifications, no consideration has been given to whether a supermajority of creditors have agreed on the new terms. As they were jurisdictional decisions rather than decisions on the merits (although once jurisdiction was established, some of the claims were settled), we missed the opportunity to see whether the arbitration tribunal would have been ready to consider whether their decision would leave sufficient fiscal space to the borrowing State to fulfil its human rights obligations towards its own population. However, those jurisdictional decisions may encourage holdout creditors not to participate in debt restructuring processes, but to claim full repayment instead by suing sovereign debtors in arbitration tribunals. The decisions have set unfortunate precedents that are not in the broader interest, permitting minority creditors to challenge investment arbitration debt restructuring agreed by supermajorities of creditors.[32]

31. On the other hand, in *Poštová Banka v. Greece* (2015), the tribunal held that sovereign bonds were not within the scope of the Slovakia-Greece bilateral investment treaty, based on the main argument that the contested sovereign debt would not fall under the definition of investment in the treaty.[33] As a result, the tribunal argued that it did not have jurisdiction to hear the claim. Compared to the decisions on Argentina described in the previous paragraph, the rather ambivalent manner in which investment arbitrators dealt with the claims against Greece is instructive, as it exemplifies how far inconsistency can find its way into investment arbitration.

32. In any case, these decisions are proof of how the scope of investment arbitration has expanded, how investment arbitrators can interpret terms found in bilateral investment treaties very broadly and, in so doing, may limit crucial policy choices made by States. Given that the tribunals mentioned above appeared to be unaware of the broader context in which sovereign debt operates, the awards also demonstrate that investment arbitration often fails to take into account considerations beyond investment protection.

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[29] See, for example, *Fedax N.V. v. Republic of Venezuela*, ICSID case No. ARB/96/3, decision on objections to jurisdiction, 11 July 1997; *Ceskoslovenska Obchodni Banka v. the Slovak Republic*, ICSID case No. ARB/97/4, decisions on objections to jurisdiction, 24 May 1999 and 1 December 2000.

[30] See *Alemanni and others v. Argentine Republic*, *Ambiente Ufficio and others v. Argentine Republic*; and *Abaclat and others v. Argentine Republic*. Despite the sovereign bonds being purchased on the secondary market, a territorial connection was established because, for financial instruments to be present in the territory, the funds only have to be made available to the host State (see also note 13).

[31] Charles N. Brower, and Alexandra Goetz-Charlier, "International investment arbitration and the global financial system: are they 'yin' and 'yang' or like oil and water?", in *International Investment Law and the Global Financial Architecture*.

[32] Felipe Suescun de Roa, "Investor-state arbitration in sovereign debt restructuring: the role of holdouts", *Journal of International Arbitration*, vol. 30, No. 2 (2013).

[33] ICSID case No. ARB/13/8, award, 9 April 2015.

33. If jurisdiction is established, then sovereign debt disputes may give rise to potential liability under investment protection standards. No investment award has yet dealt with those standards, so it remains unclear what approach might be taken. However, some of the possible interpretations of those standards will now be dealt with in turn.

34. Under most-favoured nation and national treatment clauses included in investment treaties, a host State cannot discriminate between different foreign investors or between foreign and national investors. As a result, national treatment clauses could oblige the bond-issuing State to grant foreign bondholders no less favourable treatment than domestic bondholders. The most-favoured nation standard could oblige the bond issuer to allow foreign bondholders to benefit from the most favourable treatment granted to third-country bondholders.[34] That may be problematic, as domestic bondholders often receive better treatment than foreign investors, in order to increase liquidity in the national economy and prevent outflows of foreign exchange.[35] Liability, therefore, may still arise in bilateral investment treaties with annexes that limit disputes to such standards.

35. Expropriation clauses in investment treaties prevent States from taking property of a foreign investor, either directly or indirectly, for a public purpose, without providing compensation. It could be argued that the exchange of bonds gives rise to an indirect expropriation, owing to their reduction in value, or that it interferes with the investor's legitimate expectations of payment. In particular, "take it or leave it" deals may involve a substantial deprivation.[36] The issue of whether contractual rights are subject to expropriation remains open.[34] Establishing that sovereign debt restructuring is for a public purpose may therefore be hard if it is considered a commercial transaction, as arbitration panels have sometimes ruled.[37] In contrast, State acts are subject to expropriation claims.[34]

36. Sovereign debt exchanges may violate the fair and equitable treatment standard on the basis that the swap undermines the stability of the legal framework of the host State and could also breach the legitimate expectations of a creditor.[34] The sovereign debt restructuring could also lack the required degree of transparency. If a "take it or leave it" approach is used, that could violate due process and not be in good faith. Given the expansive interpretation given to the fair and equitable treatment standard, if the foreign investor has developed a reasonable expectation of payment based on State conduct, liability may ensue.

37. The so-called umbrella clauses in bilateral investment treaties provide that a breach of a contractual obligation can simultaneously violate the provisions of such a treaty. They very often cover breaches of additional obligations undertaken by the host State, for example obligations included in national legislation. Bilateral investment treaties lay down standards of treatment rather than obligations. In order to establish a violation of a bilateral investment treaty, there needs therefore to be a

[34] See Michael Waibel, *Sovereign Defaults before International Courts and Tribunals* (Cambridge, Cambridge University Press, 2011).

[35] See Anna Gelpern and Brad Setser, "Domestic and external debt: the doomed quest for equal treatment", *Georgetown Journal of International Law*, vol. 35, No. 4 (2004); and UNCTAD, IIA Issues Note No. 2 "Sovereign debt restructuring and international investment agreements", July 2011.

[36] See Alison Wirtz, "Bilateral investment treaties, holdout investors, and their impact on Grenada's sovereign debt crisis", *Chicago Journal of International Law*, vol. 16, No. 1, (2015).

[37] See Youngjin Jung and Sangwook Daniel Han, "Sovereign debt restructuring under the investor-state dispute regime", *Journal of International Arbitration*, vol. 31, No. 1 (2014). On this issue see also Tomoko Ishikawa, "Collective action clauses in sovereign bond contracts and investment treaty arbitration — an approach to reconcile the irreconcilable", *Accounting, Economics, and Law: A Convivium*, vo. 4, No. 2 (July 2014).

violation of the contract that also breaches investment protection standards. It could be argued that when a creditor accepts new contractual terms under a collective action clause, the new terms would be legally binding as supermajorities can accept haircuts applicable to every creditor. An alternative view is that, as sovereign debt restructuring is a sovereign act, a contractual breach is capable of amounting to a violation of a bilateral investment treaty standard, which will not be protected by a collective action clause.[38] However, most sovereign debt is governed by the municipal law of a foreign financial centre and not international law. The application of such a clause might therefore be limited if another body has exclusive jurisdiction to deal with the dispute. Alternatively, the use of investment arbitration may deny exclusive jurisdiction clauses in contracts.[39] How that relationship will be addressed is unclear at this point.

38. Another example showing that investment law is not well equipped to deal with debt disputes are the defences of force majeure and necessity, which have neither in theory nor in practice been acknowledged as legal concepts that may be useful for solving claims in the context of debt restructuring.[39]

39. Those defences could, at first sight, apply in instances where a State has suffered a financial collapse and would permit a State to justify non-compliance with its sovereign debt obligations to ensure the maintenance of human rights standards. However, force majeure cannot really be invoked by sovereign debtors. Article 23 of the International Law Commission articles on responsibility of States for internationally wrongful acts provides for the force majeure defence that the respective act of the State must have been caused by an irresistible force, have been unexpected and beyond the control of the State. However, article 23 also establishes that States cannot rely on force majeure arguments if the situation is due, either alone or in combination with other factors, to the conduct of the State invoking them. In addition, the commentary to article 23 specifies that "*force majeure* does not include circumstances in which performance of an obligation has become more difficult, for example due to some political or economic crisis".[40]

40. Along the same lines, article 25 of the articles on the responsibility of States for internationally wrongful acts establishes that necessity cannot be invoked as a defence if the State has contributed to the situation of necessity, or if the act in question is not the only way for the State to safeguard an essential interest against a grave and imminent peril. It is enough for creditors to allege that debt restructuring should have happened earlier, or later, or in a different manner, to make the case that the State contributed to the problem or had other options. Tribunals would have to engage in a discussion on speculative counterfactual scenarios just to see whether an insolvent State could restructure its debt to regain sustainability.

41. Invoking force majeure and state of necessity does not encompass the complexities that financial and economic crises entail. It is not surprising that financial necessity has been successfully invoked in investment arbitrations to an extremely limited extent. Only a few early international cases, heard before the

[38] See UNCTAD IIA Issues Note No. 2 "Sovereign debt restructuring and international investment agreements"; and Ellie Norton, "International investment arbitration and the European debt crisis", *Chicago Journal of International Law*, vol. 13, No. 1 (2012).

[39] See *Suez, Sociedad General de Aguas de Barcelona, S.A. and Vivendi Universal, S.A. v. Argentina*, ICSID case No. ARB/03/19, decision on liability, 30 July 2010.

[40] See Yearbook of the International Law Commission 2001, vol. II, part 2.

Permanent Court of International Justice, acknowledged the value of force majeure as a general principle of law in the context of debt disputes.[41]

42. The inadequacy of the defence of necessity or force majeure for solving debt disputes becomes further apparent if one considers that article 27 of the articles on the responsibility of States for internationally wrongful acts suggests that the defence of force majeure and necessity can no longer be relied upon, as soon as the state of necessity has ceased to exist. In other words, the duty to comply with treaty obligations would revive after a financial crisis has been resolved. The same article also suggests that, even if non-compliance during a state of necessity can be justified, the question of compensation for any material loss caused remains to be settled independently. Even if a State manages to successfully invoke these defences in order to renegotiate its debt with its creditors and reduce its debt to a sustainable level, discussions with creditors should be resumed once the debt crisis is over, thus returning to the problematic starting point.

43. What this analysis shows is that the terms of bilateral investment treaties and the investment standards developed by arbitrators over the last decades just do not match up with debt restructuring. Investment arbitration was not designed to deal with creditors seeking to enforce sovereign bonds and does not have institutional competence to determine the ability of a State to repay its debt following default.[42] That is because the bilateral investment treaty system protects individual property claims against the State, instead of attempting to create an effective distribution of assets with regard to the interests of other claimants. If bilateral investment treaties were intended to act as a form of insolvency law for States, they would include express provisions addressing elements of insolvency and bankruptcy laws, such as provisions regarding the consolidation of claims, attachable property etc.[43] Hence, the teleology of investment arbitration, combined with its implementation in the awards to date, provides evidence that investment arbitration is not capable of addressing the wider implications of sovereign debt restructuring.

44. To summarize the arguments presented in the present section, most investment arbitration tribunals that have been confronted with the issue have held that disputes over sovereign debt are within their jurisdiction. The most recent award based on the Slovakia-Greece bilateral investment treaty is suggestive of a change of approach, but the tribunal was interpreting different terms. The logic employed by most investment tribunals seems to extend the operation of this form of dispute resolution beyond its original remit. The willingness of investment arbitrators to hear debt disputes may encourage holdout creditors to use them for dispute resolution. Should those claims be successful at the merits stage, there may be large repercussions for the liability of a host State that has undertaken a debt restructuring. All this delays and even obstructs collective debt restructuring processes. In addition to the immediate economic implications of this type of decision, there are also potentially large-scale human rights implications that will be discussed in the next section.

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[41] See in detail this discussion in Anastasios Gourgourinis, "Financial crisis as a *force majeure* under international law and EU law: defending emergency measures, à la européenne, in investment arbitration under intra-EU BITs", in *International Investment Law and the Global Financial Architecture*.

[42] See Alison Wirtz, "Bilateral investment treaties, holdout investors, and their impact on Grenada's sovereign debt crisis"; Ellie Norton, "International investment arbitration and the European debt crisis", and Michael Waibel, *Sovereign Defaults before International Courts and Tribunals*.

[43] Robert M. Ziff, "The sovereign debtor's prison: analysis of the Argentine crisis arbitrations and the implications for investment treaty law", *Richmond Journal of Global Law and Business*, vol. 10, No. 3 (2011).

V. Bilateral investment treaties, debt restructuring and human rights

45. Sovereign debt crises have immediate economic implications for States. They can result in currency collapses, the economy shrinking and inflation spikes. The banking system may also collapse. In that context, States find it very hard to develop the economy or attract FDI. The social impact on the population can be dramatic. Wages are likely to shrink and the price of imported goods increases, reducing spending power. Unemployment and economic inequality increase. Public services frequently cease to function adequately and more people become impoverished.[44] If debtor States can no longer finance essential public services and institutions, protecting the right to health, education, housing and social or physical security, human rights are severely undermined. The effective functioning of law enforcement agencies and judicial institutions is frequently affected as well, owing to lack of staffing and funds. The success of debt restructuring is not only determined by the restoration of debt sustainability, but an assessment must be made as to whether the debt restructuring has minimized the social and human cost of a financial crisis.

46. It is necessary to contextualize the manner in which debt restructuring functions to ensure adequate human rights protection in such situations. Consideration needs to be given to the diversion of national income from social and economic expenditure to debt servicing.[45] The loss of control by governments over their fiscal policy through lending conditionalities must also be acknowledged. There is a need to analyse how such conditionalities, including the required financial consolidation efforts, may undermine the ability of a State to respect, protect and fulfil human rights. That requires a shift away from the palliative approach currently adopted in the financial sector. It also requires recognition that creditor States have extraterritorial human rights obligations. Furthermore, the articles of agreement of international financial institutions cannot be used as an excuse by States to preclude them from considering human rights. When determining the scope of restructuring and haircuts, international financial institutions and governments facing a financial crisis need to ensure that sufficient resources are at their disposal to ensure that the State concerned can adequately fulfil its human rights obligations.

47. Such considerations have informed international debt relief initiatives, such as the heavily indebted poor countries and multilateral debt relief initiatives of the International Monetary Fund and the World Bank, which linked debt relief to poverty reduction. While they are a positive development, in that they provide a departure from the pre-existing system, the contribution of those programmes to poverty reduction and ensuring debt sustainability has been limited and not all creditors have participated, so the scheme can still be open to vulture funds and holdouts. Despite those limitations, this regime emphasizes that there should be orderly debt restructuring that prioritizes the social and economic functions of the debtor as a provider of public goods and services.

48. Currently, a number of countries that have received debt relief under the above-mentioned initiatives are again facing sovereign debt crises owing to overborrowing on the commercial markets. The push towards private financing and blended financing in the 2030 Agenda for Sustainable Development will compound

[44] See, for example, A/HRC/31/60/Add.2 and A/HRC/34/57/Add.1.

[45] Celine Tan, "Life, debt and human rights: contextualizing the international regime for sovereign debt relief" in *Poverty and the International Economic Legal System: Duties to the World's Poor*, K. Nadakavukaren Schefer, ed. (Cambridge, Cambridge University Press, 2013).

this, as governments are now being pushed towards looking for "innovative and private forms of financing" at a time when there is a decline in public financing for global public goods and public services. Without reducing unsustainable debt, progress in realizing the Sustainable Development Goals and economic, social and cultural rights, including the right to development, will be severely undermined.

49. Given the vague and open texts of bilateral investment treaties, the expansive way in which international arbitrators interpret investor rights, their limited background in non-commercial matters[40] and their limited accountability, investment arbitration does not easily fit into a framework that integrates human rights and social and economic sustainability. Instead, it is likely to slow down sovereign debt restructuring by providing an accessible forum for holdout creditors and vulture funds, which will be a disincentive to negotiated settlements. The longer the process takes, the more damaging it is to debtor States. Delays draw more capital away from States, which again detrimentally affects the realization of human rights in the countries concerned. In addition, international financial institutions can hardly participate in investment proceedings, as they cannot be sued nor sue under the terms of bilateral investment treaties.

50. Investment arbitration has so far failed to recognize the broader context in which debt restructuring operates. Asset-based definitions of investment have encouraged the majority of investment tribunals to establish jurisdiction over sovereign bonds. Should a decision proceed to the merits, vague investment protection standards could give rise to debtor State liability for actions taken as part of debt restructuring. Liability may arise under several investment protection standards, especially as collective action clauses are unlikely to provide full protection against legitimate actions taken by the State in its capacity as a sovereign power: collective action clauses do not protect sovereign debtors against manipulative use of majorities by a reduced number of powerful creditors. The risk is that investment tribunals may simply rule that debtor States which fail to pay back 100 per cent of their debt to all their creditors remain liable for all of their debt, eroding further the fiscal space of States in economic difficulties.

51. In addition, courts and arbitrators have been reluctant to admit and support in their decisions the state of necessity defence, even if the State concerned is facing extreme social and economic problems while dealing with debt restructuring.[41]

52. Investment arbitration may limit the fiscal and policy space of a State and exacerbate the effects of a debt crisis. It may prevent reforms from being implemented to tackle the roots of the problems that led to the default. Investment arbitration "creates profound tension between the powerful need for reform and the prospect of significant liability. The more severe the crisis, the more likely that reform is necessary. Yet, the more profound the reform, the more likely that investors will initiate investment treaty claims".[43]

53. Investment tribunals have so far been rather reluctant to consider human rights when deciding disputes between creditors and defaulting States. As set out above, human rights are not entrenched within investment arbitration and the texts of most bilateral investment treaties are rather weak on human rights. It is therefore unlikely that detailed and robust consideration will regularly be given to, for example, the

[40] One of the main reasons for this approach relates to the legal culture of commercial arbitration, which dominates the investment arbitration community: the commercial mindset emphasizes private law obligations and in particular the importance of contractual obligations. This legal culture is considerably influenced by the two parties to the particular legal dispute and tends to downplay the role of public interest (including the role of human rights issues). See Moshe Hirsch, "Investment tribunals and human rights: divergent paths", in *Human Rights in International Investment Arbitration*.

International Covenant on Economic, Social and Cultural Rights or the Basic Principles on Sovereign Debt Restructuring Processes, which include key principles, such as debt sustainability, majority rule, human rights and the prevention of abusive behaviour. Furthermore, the failure of investment tribunals to consider sovereign bonds as distinguishable from commercial bonds proves that they do not take into account State obligations as part of the decision-making process.

54. A human rights-compliant approach to solving debt problems is likely to be undermined by holdout creditors and vulture funds, which access investment arbitration in order to enforce the terms of their sovereign bonds. Investment arbitration is not legally or institutionally equipped to fulfil that role and the practices of investment arbitrators are unlikely to permit the wider context of debt restructuring (including the human rights implications) to influence their decision-making. The result could be increased power for holdout creditors and vulture funds, increased liability for debtor States and associated with this a higher risk that human rights are undermined in debtor States.

55. In theory, bilateral investment treaties can be interpreted in a manner that is mindful of the need for financial stability and broader macroeconomic and social goals. However, in practice, arbitrators will be unlikely to surpass the technical corset of bilateral investment treaties to address adequately the complex and comprehensive questions that debt restructuring entails, including finding human rights-compliant solutions to financial crises.

VI. Conclusions and recommendations

A. Conclusions

56. **In the absence of an international framework to regulate sovereign debt restructuring, investment arbitration has been seen as a potential forum for holdout creditors and vulture funds for seeking to enforce sovereign debt instruments. That goes against the fact that investment arbitration was created to protect FDI and productive investment, with the aim of promoting economic development. The system of investment arbitration was not designed to deal with financial obligations, nor to provide protection for the claims of speculative hedge funds and non-cooperative creditors. However, to date, most investment tribunals have found jurisdiction over sovereign debt disputes, despite the unique context in which debt restructuring takes place. The willingness of investment arbitrators to hear such disputes may encourage vulture funds and holdout creditors to use this form of dispute resolution.**

57. **In purely economic terms, bilateral investment treaties do not contain standards or guidelines to make it possible to judge debt restructuring holistically, nor do they deal with the collective action problems that lie at the heart of any bankruptcy process. On the contrary, creditors will be tempted to ride free by withholding their contribution to the collective undertaking, while enjoying the benefits of the effort of all the other creditors. "It is not among the purposes of investment law to facilitate the unfair treatment of some investors (those who accept bond exchange offers) to the benefit of the other investors in the same situations (those who chose to litigate). Hence, the FET [fair and equitable treatment] standard should only protect investors against unfair sovereign debt workout procedures, for example against non-transparent and inaccessible negotiations, or against unilateral debt repudiation without any negotiations at all."[20] However, we see that arbitrators are ready to go well beyond this task.**

58. **In the case of *Abaclat and others v. Argentina*, the tribunal remarked that the dispute did "not derive from the mere fact that Argentina failed to perform its payment obligations under the bonds but from the fact that it intervened as a sovereign by virtue of its State power to modify its payment obligations towards its creditors". That is a fallacious argument. It is because the debtor cannot pay 100 per cent of its debts that debt relief is needed. From an economic point of view, the tribunal asked for the impossible; from a human rights perspective, it pushed the State to let its population down.**

59. **Such decisions will generate further economic problems by virtue of delaying debt restructuring. They also obstruct the restructuring, as they create an incentive among creditors not to agree with the debtor in order to reach a level of sustainable debt, as nobody will be ready to cooperate if some creditors are able to receive 100 per cent of what they are owed. At the end of the day, arbitrators would have to decide whether and to what extent investors that choose not to agree with the majority, but hold out and litigate, are protected. The problem is that in the context of sovereign insolvency, by definition, the debtor cannot fully repay its debts. An expansive protection of investor rights in such contexts would create further liabilities for debtor States, impair their economic recovery and reduce funding for public services giving effect to human rights obligations. It goes without saying that it is not yet a consolidated idea among all arbitrators that bilateral investment treaties cover sovereign bonds, as the case of *Poštová Banka v. Greece* has recently shown.**

60. **While States and the international community are making great efforts to prevent or minimize vulture and holdout litigation, the fact that investment arbitrators seem to be opening a new door for those creditors to deploy their disruptive strategies is, to say the least, disappointing. Even more so if we consider that neither financial law nor human rights law play a meaningful role in investment arbitration. Systemic financial risks need better and well-coordinated responses from global institutions and international law. A deliberative approach is required: investment protection law has to be interpreted in conformity with the rationalities of other law, such as international human rights law and financial regulations required for ensuring debt sustainability, financial stability, equality and social and economic rights.**[20]

61. **An institutional forum that solves debt disputes needs to be based on a broad international consensus. If countries actually think that it would be a good idea that investment arbitrators be in charge of taking the most fundamental decisions during and after financial crises, States should say so openly, but most bilateral investment treaties do not seem to reflect that idea. In fact, bilateral investment treaties using the words "sovereign debt" or "sovereign bonds" are rare and special arrangements for "government securities" and "public debt" are found in a limited (although increasing) number of treaties concluded since the 1990s.**[47] **In this vein, almost all sovereign bonds issued provide for litigation rather than arbitration.**[48]

[47] See Kei Nakajima, "An elusive safeguard with loopholes: sovereign debt and its 'negotiated restructuring' in international investment agreements in the age of global financial crisis", *International Review of Law*, 2016, vol. 2016, No. 3. See also, for example, annex G of the United States-Uruguay bilateral investment treaty (2005); United States-Peru free trade agreement (2006); and Canada-Burkina Faso bilateral investment treaty (signed in 2015 but not yet in force).

[48] See for example Stephen J. Choi and Mitu Gulati, "An empirical study of securities disclosure practice", Tulane Law Review, vol. 80 (2006).

62. **If arbitrators make the interpretation that they have jurisdiction to solve a debt dispute, human rights law must be regarded as applicable law to debtors and creditors alike. To think of areas of our society that are immune from human rights standards is as incorrect as it is dangerous. Sovereign debt restructuring should be subject to the human rights principles of non-discrimination, progressive realization, non-retrogression and ensuring minimum core obligations. Consequently, there is a need to assess if there will be any deterioration of rights and how human rights impacts will interact with each other during the relevant period.[49] Ideally, a human rights impact assessment should be conducted, followed by monitoring. That may also require consideration of intertemporal human rights trade-offs, as expenditure cuts may need to be made to ensure the sustainability of public services in the future. Protecting public services in the short term, while increasing debt, may exacerbate difficulties with human rights compliance later. On the other hand, States also need to consider the longer-term impact of, for example, cuts to education for future generations. When States attempt to address this balance, creditors will need to be flexible.**

63. **International debt disputes should be solved in a transparent, fair and timely manner through an international sovereign debt workout mechanism informed by the Guiding principles on foreign debt and human rights (A/HRC/20/23 and Corr.1) and the Basic Principles on Sovereign Debt Restructuring Processes. The Basic Principles systematized and consolidated the legal principles of public international law, which reflect progressive trends in current practice that corroborate, for example, the principle of sovereign debt sustainability.[50] Investment arbitrators would need very good reasons not to consider these principles if they have to decide on debt disputes with an impact on debt restructuring.**

B. Recommendations

1. Negotiation of investment agreements

64. **Bilateral and multilateral investment agreements should be subject to human rights impact assessments before they are concluded. The Guiding principles on human rights impact assessments of trade and investment agreements (A/HRC/19/59/Add.5) provide guidance to States on how best to ensure that trade and investment agreements are consistent with their obligations under human rights.**

65. **States should ensure that negotiations of investment agreements are conducted in an open and transparent manner, allowing parliamentarians, affected communities and other stakeholders (such as taxpayers) access to all relevant documentation.**

66. **Appropriate consultation procedures and mechanisms should be developed to ensure the right to participation in the drafting, negotiation and approval of international investment agreements.**

[49] Daniel Bradlow, "Can parallel lines ever meet? The strange case of the international standards on sovereign debt and business and human rights", *Yale Journal of International Law*, vol. 41, No. 2 (2016).

[50] See Juan Pablo Bohoslavsky and Matthias Goldmann, "An incremental approach to sovereign debt restructuring: sovereign debt sustainability as a principle of public international law".

2. Content of investment agreements

67. **When negotiating or revising investment agreements, States should ensure that their articles include explicit provisions that refer to the human rights obligations of investors and host and home States.**

68. **Investment agreements should include provisions reaffirming that investors should respect human rights, as set out in international human rights treaties, the Guiding principles on business and human rights and in the ILO Declaration on Fundamental Principles and Rights at Work.**

69. **International investment agreements should exclude investment claims related to debt restructuring disputes. Based on the volume, nature and ramifications of the problems that investment arbitration poses to sovereign debtors and their populations, to creditors and to the international financial system, States should explicitly exclude this possibility, as some bilateral treaties already do.[51] That is the practice followed, for example, by Colombian investment agreements.**

70. **Investment agreements should include, in any case, clauses in relation to the right to regulate economic activities, in particular during times of economic or financial collapse. They should include debt agreements reached in a non-discriminatory manner with supermajorities of creditors.**

71. **Investment agreements should specify that bona fide measures aimed at protecting the human rights of the population and ensuring debt sustainability do not constitute a breach of the agreement and are non-compensable.**

3. Investment dispute settlement

72. **Arbitration tribunals must consider human rights law as applicable law for the interpretation of investment treaties.**

73. **The transparency of investment arbitration should be increased through publishing all details of the dispute and in general holding hearings in public.**

74. **Non-parties to the dispute should have a right to attend arbitration proceedings and affected communities and public interest organizations should have a right to make written presentations and amicus curiae submissions.**

75. **International investment treaties should provide for a robust system of review of awards to reduce arbitrariness.**

76. **Investment agreements should include rules to ensure the independence of appointed arbitrators and require that arbitrators have an adequate knowledge of investment law and international law standards in the field of finance, human rights, labour and the environment.**

77. **Existing financial and bankruptcy law principles should be seriously considered by arbitrators if they consider they have jurisdiction to solve debt disputes. Arbitrators need, in particular, to consider the implications of their awards for the economy of the debtor State, for the rights of the affected population and for the rights of all creditors.**

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[51] See, for example, Peru-Republic of Korea Free Trade Agreement, Dominican Republic-Central America Free Trade Agreement (CAFTA-DR) and United States-Uruguay bilateral investment treaty.